



Safety Data Sheet

Revision Number 0

C08681 C08683

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

| Product | identifier |
|---------|------------|
| Product | name |

Phosphorous Reagent #2

Other means of identification 5156 Product Code(s) UN-No 2790

Recommended use of the chemical and restrictions on use Use as a laboratory reagent. Laboratory chemicals. Industrial (not for food or food contact **Recommended Use** use).

Details of the supplier of the safety data sheet

Manufacturer Address LaMotte Company, Inc. 802 Washington Avenue P.O. Box 329 Chestertown, MD 21620 USA T 410-778-3100 F 410-778-9748

Emergency telephone number

24 Hour Emergency Number (CHEM-TEL):USA, Canada, Puerto Rico 1-800-255-3924 Outside North American Continent (Call collect) 813-248-0585

2. HAZARDS IDENTIFICATION

| Skin corrosion/irritation | Category 2 | |
|-----------------------------------|------------|--|
| Serious eye damage/eye irritation | Category 2 | |

EMERGENCY OVERVIEW

| WARNING | | |
|---|-----------------------|--------------|
| Hazard statements Causes skin irritation. Causes serious eye | irritation. | |
| | | |
| | | |
| Appearance Clear, colorless | Physical state liquid | Odor vinegar |

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. IF ON SKIN: Wash with plenty of soap and water

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If skin irritation occurs: Get medical advice/attention

Take off contaminated clothing and wash before reuse

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

IF SWALLOWED, Drink 1 or 2 glasses of water, Call a physician immediately

3. COMPOSITION/INFORMATION ON INGREDIENTS

| Chemical name | CAS No | Weight-% |
|----------------------------|------------|----------|
| Sodium molybdate dihydrate | 10102-40-6 | 2.5 |
| Acetic acid | 64-19-7 | 10 |

| 4. FIRST AID MEASURES | | | |
|------------------------------------|--|--|--|
| First Aid Measures | | | |
| General advice | Do not get in eyes, on skin, or on clothing. Show this safety data sheet to the doctor in attendance. | | |
| Eye contact | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately. | | |
| Skin contact | Wash off immediately with soap and plenty of water for at least 15 minutes. Take off contaminated clothing and wash before reuse. If symptoms persist, call a physician. | | |
| Inhalation | IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. If symptoms persist, call a physician. | | |
| Ingestion | Do NOT induce vomiting. Drink plenty of water. Call a physician immediately. | | |
| Self-protection of the first aider | Use personal protection recommended in Section 8. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. | | |

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Protective equipment and precautions for firefighters As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid contact with skin, eyes or clothing. Use personal protection recommended in Section 8. **Environmental precautions** See Section 12 for additional Ecological Information. Methods and material for containment and cleaning up

Methods for containment Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local /

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| | national regulations (see Section 13). After cleaning, flush away traces with water. Containerize spill material and hold for later disposal. If local regulations permit, dissolve with large volume of water, neutralize with alkaline material (sodium bicarbonate), then rinse to drain with excess water. | | | |
|--|---|-------------------|--|--|
| Methods for cleaning up | | | | |
| ······································ | 7. HANDLING AND | STORAGE | a and a second | |
| Precautions for safe handling | | | | |
| Handling | Handle in accordance with good industrial hygiene and safety practice. Do not taste or swallow. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. | | | |
| Conditions for safe storage, inc | luding any incompatibilities | | | |
| Storage | Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from moisture. Keep out of the reach of children. | | | |
| Incompatible Products | Strong oxidizing agents. Metals. Alcohols. Amines. | | | |
| | | | | |
| 8. | EXPOSURE CONTROLS/PE | RSONAL PROTECTION | and the second sec | |
| 8. Chemical name | ACGIH TLV | OSHA PEL | NIOSH IDLH | |
| | | | | |

Engineering Measures Ensure that eyewash stations and safety showers are close to the workstation location. Showers Eyewash stations Ventilation systems.

| Individual protection measures | s, such as personal protective equipment |
|--------------------------------|--|
| Eye/Face Protection | Wear safety glasses with side shields (or goggles). Avoid contact with eyes. |
| Skin and body protection | Gloves & Lab Coat. Impervious clothing. Protective gloves. Nitrile rubber. |
| Respiratory protection | Use only with adequate ventilation. |
| Hygiene Measures | Avoid contact with eyes, skin and clothing. Handle in accordance with good industrial hygiene and safety practice. Wash hands and face before breaks and immediately after handling the product. Take off contaminated clothing and wash before reuse. |

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

| Physical state Appearance | liquid Clear, colorless | Odor | vinegar |
|--|---|------------------|-----------|
| Property | Values_ | Remarks • Method | |
| pH Melting point / freezing point Boiling point / boiling range Flash point | 3 No information available No information available No information available | No information a | available |

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5156 Phosphorous Reagent #2

| Stability | Stable under recommended storage conditions. |
|------------------------------|--|
| int and a set of | 10. STABILITY AND REACTIVITY |
| Bulk density | No information available |
| Density | No information available |
| VOC Content (%) | No information available |
| Molecular weight | No information available |
| Softening point | No information available |
| Other Information | |
| Oxidizing properties | No information available |
| Explosive properties | No information available |
| Dynamic viscosity | No information available |
| Kinematic viscosity | No information available |
| Decomposition temperature | No information available |
| Autoignition temperature | No information available |
| Partition coefficient | No information available |
| Solubility in other solvents | No information available |
| Water solubility | Soluble in water |
| Specific gravity | No data available |
| Vapor density | No information available |
| Vapor pressure | No information available |
| Lower flammability limit: | No information available |
| Upper flammability limit: | No information available |
| Flammability Limit in Air | |
| Flammability (solid, gas) | No information available |
| Evaporation rate | |

Hazardous polymerization **Conditions** to avoid

Incompatible materials

Excessive heat. Exposure to light. Strong oxidizing agents. Metals. Alcohols. Amines. Hazardous decomposition products Hazardous decomposition products formed under fire conditions -. Carbon oxides (COx). Sodium oxides.

11. TOXICOLOGICAL INFORMATION

Hazardous polymerization does not occur.

Information on likely routes of exposure

Component Information

| Chemical name Oral LD50 | | Dermal LD50 | Inhalation LC50 | |
|---------------------------------------|---------------------------------------|-----------------------|------------------------|--|
| Sodium molybdate dihydrate 10102-40-6 | = 4 g/kg (Rat) = 4000 mg/kg (Rat) | Not Established | > 2080 mg/m³ (Rat) 4 h | |
| Acetic acid 64-19-7 | = 3310 mg/kg (Rat) | = 1060 mg/kg (Rabbit) | = 11.4 mg/L (Rat) 4 h | |

Information on toxicological effects

| Sensitization | No information available | | | |
|--|--------------------------|-----------------|-----------------|------|
| Chemical name | ACGIH | IARC | NTP | OSHA |
| Sodium molybdate dihydrate 10102-40-6 | A3 | Not Established | Not Established | |
| Acetic acid 64-19-7 | - | Not Established | Not Established | |

A3 - Animal Carcinogen

ATEmix (oral) ATEmix (dermal)

27426 10600 mg/kg mg/l

12. ECOLOGICAL INFORMATION

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Ecotoxicity Unknown Aquatic Toxicity 2.5 % of the mixture consists of components(s) of unknown hazards to the aquatic environment r Flea)

| Chemical name | TOXICITY to Algae | TOXICITY TO FISH | Daprina magna (water riea) |
|--|-------------------|--|--|
| Sodium molybdate dihydrate 10102-40-6 | Not Established | Not Established | Not Established |
| Acetic acid 64-19-7 | Not Established | 75: 96 h Lepomis macrochirus mg/L LC50 static 79: 96 h Pimephales promelas mg/L LC50 static | 47: 24 h Daphnia magna mg/L EC50 65: 48 h Daphnia magna mg/L EC50 Static |

Persistence and degradability No information available.

Bioaccumulation/Accumulation

No information available.

| Chemical name | Log Pow |
|--|-----------------|
| Sodium molybdate dihydrate 10102-40-6 | Not Established |
| Acetic acid 64-19-7 | -0.31 |

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Dispose of contents/containers in accordance with local regulations.

Contaminated packaging

Dispose of waste product or used containers according to local regulations.

| Chemical name | RCRA | RCRA - Basis for Listing | RCRA - D Series Wastes | RCRA - U Series Wastes |
|--|-----------------|--------------------------|------------------------|------------------------|
| Sodium molybdate dihydrate 10102-40-6 | Not Established | | Not Established | Not Established |
| Acetic acid 64-19-7 | Not Established | • | Not Established | Not Established |

| Chemical name | RCRA - Halogenated Organic Compounds | RCRA - P Series Wastes | RCRA - F Series Wastes | RCRA - K Series Wastes |
|--|---|------------------------|------------------------|------------------------|
| Sodium molybdate dihydrate 10102-40-6 | Not Established | Not Established | Not Established | Not Established |
| Acetic acid 64-19-7 | Not Established | Not Established | Not Established | Not Established |

| Chemical name | California Hazardous Waste Status |
|--|-----------------------------------|
| Sodium molybdate dihydrate 10102-40-6 | • |
| Acetic acid 64-19-7 | - |

14. TRANSPORT INFORMATION

DOT

Proper shipping name UN-No Hazard Class ACETIC ACID SOLUTION (>10%, <50%) 2790 8

ICAO

Packing group

Not regulated

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5156 Phosphorous Reagent #2

Revision Date May-14-2015

| ATA | |
|------|---------|
| Prop | per shi |
| UN- | No |

| UN-No Hazard Class |
|-----------------------|
| Hazard Class |
| |
| Packing group |

Proper shipping name UN-No Hazard Class Packing group

RID

Not regulated ACETIC ACID SOLUTION (>10%, <50%) 2790 8 111

ACETIC ACID SOLUTION (>10%, <50%)

Not regulated

Not regulated

2790 8 111

15. REGULATORY INFORMATION

International Inventories TSCA DSL/NDSL EINECS/ELINCS ENCS IECSC KECL PICCS AICS

Complies Does not comply Does not comply Complies Complies Does not comply Complies Complies

Legend: TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances ENCS - Japan Existing and New Chemical Substances IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

| Chemical name | SARA 313 - Threshold Values % |
|--|-------------------------------|
| Sodium molybdate dihydrate 10102-40-6 | Not Established |
| Acetic acid 64-19-7 | Not Established |
| SARA 311/312 Hazard Categories | |
| Acute health hazard | Yes |
| Chronic Health Hazard | Yes |
| Fire hazard | No |
| Sudden release of pressure hazard | No |
| Reactive Hazard | No |

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

| Chemical name | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants | CWA - Hazardous Substances |
|--|--------------------------------|------------------------|---------------------------|-------------------------------|
| Sodium molybdate dihydrate 10102-40-6 | Not Established | Not Established | Not Established | Not Established |
| Acetic acid | 5000 lb | Not Established | Not Established | X |

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64-19-7

CERCLA This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

| Chemical name Hazardous Substances RQs | | CERCLA/SARA RQ | RQ |
|--|---------|-----------------|--|
| Sodium molybdate dihydrate 10102-40-6 | • | Not Established | - |
| Acetic acid 64-19-7 | 5000 lb | Not Established | RQ 5000 lb final RQ RQ 2270 kg final RQ |

US State Regulations

This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

| Chemical nan | ne | New Jersey | Massachusetts | Pennsylvania |
|---|---|---------------------------|-----------------|--------------------------------------|
| Sodium molybdate d 10102-40-6 | | Not Established | Not Established | Not Established |
| Acetic acid 64-19-7 | | x | X | x |
| | | 16. OTHER IN | FORMATION | |
| IFPA_ | Health hazard | | | Physical and Chemical Hazards N/A |
| | Health hazard | 2 Flammability | 0 Stability 1 | |
| 2 | , | | | |
| Health Hazard | 2 | | | |
| Fire Hazard Reactivity | ·0 1 | | | |
| Reactionty | | egulatory Affairs Departm | ent | |
| renared by | H I I I I I I I I I I I I I I I I I I I | | | |
| Prepared by ssuing Date | | | | |
| Prepared by ssuing Date Revision Date | M | ay-14-2015 ay-14-2015 | | |

Disclaimer The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of Material Safety Data Sheet

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Safety Data Sheet

Revision Number 0

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

| Product identifier | |
|-------------------------------|--|
| Product name | Methyl Red 1% |
| Other means of identification | on |
| Product Code(s) | 2238 |
| UN-No | 1170 |
| Recommended use of the c | hemical and restrictions on use |
| Recommended Use | Laboratory chemicals. Industrial (not for food or food contact use). Use as a laboratory reagent. |
| Details of the supplier of th | e safety data sheet |
| | Manufacturer Address |
| | LaMotte Company, Inc. |
| | 802 Washington Avenue |

P.O. Box 329 Chestertown, MD 21620 USA T 410-778-3100 F 410-778-9748

Emergency telephone numbers (CHEM-TEL):USA, Canada, Puerto Rico 1-800-255-3924 Outside North American Continent (Call collect) 813-248-0585

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2. HAZARDS IDENTIFICATION

| Acute toxicity - Oral | Category 4 |
|--|-------------|
| Serious eye damage/eye irritation | Category 2A |
| Germ cell mutagenicity | Category 1B |
| Carcinogenicity | Category 1A |
| Reproductive toxicity | Category 1A |
| Specific target organ toxicity (single exposure) | Category 2 |
| Specific target organ toxicity (repeated exposure) | Category 1 |
| Physical hazards Flammable Liquids. | Category 2 |

EMERGENCY OVERVIEW

DANGER

Hazard statements

Harmful if swallowed. Causes serious eye irritation. May cause genetic defects. May cause cancer. May damage fertility or the unborn child. May cause damage to organs. Causes damage to organs through prolonged or repeated exposure. . Highly flammable liquid and vapor.



Appearance red transparent

Physical state liquid

Odor Alcohol

Precautionary Statements - Prevention

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Wash face, hands and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Wear eye/face protection. Do not breathe dust/fume/gas/mist/vapors/spray. Keep away from heat/sparks/open flames/hot surfaces. No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge.

Response: IF exposed or concerned: Get medical advice/attention.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

IF ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse skin with water.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth.

In case of fire: Use CO2, dry chemical, or foam for extinction

Storage:

Store locked up. Store in a well-ventilated place. Keep cool. Disposal:

Dispose of contents/container to an approved waste disposal plant.

Other Hazards Toxic to aquatic life with long lasting effects.

Unknown Acute Toxicity 1% of the mixture consists of ingredient(s) of unknown toxicity.

3. COMPOSITION/INFORMATION ON INGREDIENTS*

Chemical Family

Ethanol solution.

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| Chemical name | CAS No. | Weight-% |
|----------------|---------|----------|
| Methyl alcohol | 67-56-1 | 4 |
| Ethyl alcohol | 64-17-5 | 92 |

| 4. FIRST AID MEASURES | | | |
|---|--|--|--|
| | | | |
| Do not get in eyes, on skin, or on clothing. | | | |
| Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician. | | | |
| Wash skin with soap and water. If irritation develops or persists, consult physician. | | | |
| Remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration and contact emergency personnel. Call a physician immediately. | | | |
| Drink 1 or 2 glasses of water. Induce vomiting, but only if victim is fully conscious. Consult a physician. Rinse mouth. | | | |
| Use personal protective equipment, Do not use mouth-to-mouth method if victim ingested o inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. | | | |
| Treat symptomatically. | | | |
| | | | |

Suitable extinguishing media Water spray, dry chemical, carbon dioxide (CO2), or foam.

Protective equipment and precautions for firefighters As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

| | 6. ACCIDENTAL RELEASE MEASURES |
|---------------------------------|---|
| Personal precautions, protectiv | e equipment and emergency procedures |
| Personal precautions | See section 8. |
| Environmental precautions | See Section 12 for additional Ecological Information. |
| Methods and material for conta | inment and cleaning up |
| Methods for containment | Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container. |
| Methods for cleaning up | Soak up with inert absorbent material. After cleaning, flush away traces with water. |
| | 7. HANDLING AND STORAGE |
| Precautions for safe handling | |
| Handling | Handle in accordance with good industrial hygiene and safety practice. Prevent contact with skin, eyes, and clothing. Do not taste or swallow. Do not eat, drink, or smoke when using this product. |

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Conditions for safe storage, including any incompatibilities

Storage:

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat and sources of ignition. Keep out of the reach of children.

Incompatible Products

Strong inorganic acids and oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

| Chemical name | ACGIH TLV | OSHA PEL | NIOSH IDLH |
|---------------------------------|---|--|--|
| Methyl alcohol 67-56-1 | STEL: 250 ppm TWA: 200 ppm S* | TWA: 200 ppm TWA: 260 mg/m ³ (vacated) TWA: 200 ppm (vacated) TWA: 260 mg/m ³ (vacated) STEL: 250 ppm (vacated) STEL: 325 mg/m ³ (vacated) S* | IDLH: 6000 ppm TWA: 200 ppm TWA: 260 mg/m ³ STEL: 250 ppm STEL: 325 mg/m ³ |
| Ethyl alcohol 64-17-5 | STEL: 1000 ppm | TWA: 1000 ppm TWA: 1900 mg/m ³ (vacated) TWA: 1000 ppm (vacated) TWA: 1900 mg/m ³ | IDLH: 3300 ppm TWA: 1000 ppm TWA: 1900 mg/m ³ |
| Appropriate engineering control | ols | | |
| Engineering Measures | Showers Eyewash stations Ventilation systems. | ulamont | |
| individual protection measures | s, such as personal protective ec | luipment | |
| Eye/Face Protection | Wear safety glasses with sid | de shields (or goggles). | |
| Skin and body protection | Wear protective gloves/cloth | ning. | |
| Respiratory protection | Use only with adequate ven | tilation. | |
| Hygiene Measures | Do not eat, drink or smoke w | when using this product. | |
| | | | |

Information on basic physical and chemical properties

| Physical state | liquid | | | |
|--------------------------------|--------------------------|------------------|------------------|--|
| Appearance | red transparent | Odor | Alcohol | |
| Property | Values | Remarks • Met | hod | |
| pH | | | | |
| Melting point / freezing point | No information available | | | |
| Boiling point / boiling range | 78.4 °C / 173 °F | Ethanol | | |
| Flash point | ca 17 °C / 63 °F | Closed cup for 9 | 0% Ethyl Alcohol | |
| Evaporation rate | | | | |
| Flammability (solid, gas) | No information available | | | |
| Flammability Limit in Air | | | | |
| Upper flammability limit: | 19.0 for Ethanol | | | |
| Lower flammability limit: | 3.3 for Ethanol | | | |
| Vapor pressure | 48 mmHg @ 20°C | for SDA (3A) Eth | vl Alcohol | |
| Vapor density | 1 (Air=1) | | | |
| Specific gravity | No information available | | | |
| Water solubility | No information available | | | |
| Solubility in other solvents | No information available | | | |
| Partition coefficient | No information available | | | |

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| Stability | Stable under normal conditions of use and storage |
|---------------------------|---|
| | 10. STABILITY AND REACTIVITY |
| Bulk density | No information available |
| Density | No information available |
| VOC Content (%) | No information available |
| Molecular weight | No information available |
| Softening point | No information available |
| Other Information | |
| Oxidizing properties | No information available |
| Explosive properties | No information available |
| Dynamic viscosity | No information available |
| Kinematic viscosity | No information available |
| Decomposition temperature | No information available |
| Autoignition temperature | No information available |

| Hazardous polymerization | Hazardous polymerization does not occur. |
|--------------------------|--|
| Conditions to avoid | Heat, flames and sparks. |
| Incompatible materials | Strong inorganic acids and oxidizing agents. |

Hazardous decomposition products Carbon oxides (COx).

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Component identification

| Chemical name | ATEmix (oral) | ATEmix (dermal) | Inhalation LC50 |
|---------------------------|----------------------|------------------------|--|
| Methyl alcohol 67-56-1 | = 6200 mg/kg (Rat) | = 15800 mg/kg (Rabbit) | = 64000 ppm (Rat) 4 h = 22500 ppm (Rat) 8 h |
| Ethyl alcohol 64-17-5 | = 7060 mg/kg (Rat) | Not Established | = 124.7 mg/L (Rat) 4 h |

Information on toxicological effects

| ACGIH | IARC | NTP | OSHA |
|-----------------|-----------------|-----------------|-----------------|
| Not Established | Not Established | Not Established | Not Established |
| A3 | Group 1 | Known | x |
| | A3 | A3 Group 1 | |

Chronic toxicity Ethanol has been shown to be a reproductive toxin only when consumed as an alcoholic beverage.

| ATEmix | (oral) |
|--------|------------------------|
| ATEmix | (dermal) |
| ATEmix | (inhalation-dust/mist) |

1,886.00 mg/kg 7,500.00 mg/kg 12.53 mg/l

12. ECOLOGICAL INFORMATION

Ecotoxicity

| Chemical name | Toxicity to Algae | Toxicity to Fish | Daphnia Magna (Water Flea |
|---------------------------|-------------------|--|---------------------------|
| Methyl alcohol 67-56-1 | Not Established | 13500 - 17600: 96 h Lepomis macrochirus mg/L LC50 flow-through 18 - 20: 96 h Oncorhynchus mykiss mL/L LC50 static 19500 - 20700: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 28200: 96 h | Not Established |

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| | | Pimephales promelas mg/L LC50 flow-through 100: 96 h Pimephales promelas mg/L LC50 static | |
|--------------------------|-----------------|---|---|
| Ethyl alcohol 64-17-5 | Not Established | 12.0 - 16.0: 96 h Oncorhynchus mykiss mL/L LC50 static 13400 - 15100: 96 h Pimephales promelas mg/L LC50 flow-through 100: 96 h Pimephales promelas mg/L LC50 static | 9268 - 14221: 48 h Daphnia magna mg/L LC50 10800: 24 h Daphnia magna mg/L EC50 2: 48 h Daphnia magna mg/L EC50 Static |

Persistence and degradability No information available.

Bioaccumulation/Accumulation

No information available.

| Chemical name | Log Pow |
|---------------------------|---------|
| Methyl alcohol 67-56-1 | -0.77 |
| Ethyl alcohol 64-17-5 | -0.32 |

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Dispose of waste product or used containers according to local regulations. This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

Contaminated packaging

Do not reuse empty containers.

| Chemical name | RCRA | RCRA - Basis for Listing | RCRA - D Series Wastes | RCRA - U Series Wastes |
|---------------------------|-----------------|-----------------------------------|-------------------------------|-------------------------------|
| Methyl alcohol 67-56-1 | Not Established | Included in waste stream: F039 | Not Established | U154 |
| Ethyl alcohol 64-17-5 | Not Established | - | Not Established | Not Established |

| Chemical name | RCRA - Halogenated Organic Compounds | RCRA - P Series Wastes | RCRA - F Series Wastes | RCRA - K Series Wastes |
|---------------------------|---|------------------------|------------------------|------------------------|
| Methyl alcohol 67-56-1 | Not Established | Not Established | Not Established | Not Established |
| Ethyl alcohol 64-17-5 | Not Established | Not Established | Not Established | Not Established |

| Chemical name | California Hazardous Waste Status |
|----------------|-----------------------------------|
| Methyl alcohol | Toxic |
| 67-56-1 | Ignitable |
| Ethyl alcohol | Toxic |
| 64-17-5 | Ignitable |

14. TRANSPORT INFORMATION

DOT

Proper shipping name ETHAN UN-No 1170 Hazard Class 3 Packing group II

ETHANOL SOLUTION (Ethyl Alcohol Solution) 1170

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| 1170 |
|------|
| 3 |
| 0 |
| |
| 1170 |
| 3 |
| 11 |
| |

15. REGULATORY INFORMATION

| International Inventories | |
|---------------------------|-----------------|
| TSCA | Does not comply |
| DSL/NDSL | Complies |
| EINECS/ELINCS | Complies |
| ENCS | Does not comply |
| IECSC | Complies |
| KECL | Complies |
| PICCS | Complies |
| AICS | Complies |

Legend: TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances Control Act Section 8(b) Internoly EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances ENCS - Japan Existing and New Chemical Substances IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

| Chemical name | SARA 313 - Threshold Values % |
|-----------------------------------|-------------------------------|
| Methyl alcohol 67-56-1 | 1.0 |
| Ethyl alcohol 64-17-5 | Not Established |
| SARA 311/312 Hazard Categories | |
| Acute health hazard | Yes |
| Chronic Health Hazard | Yes |
| Fire hazard | Yes |
| Sudden release of pressure hazard | No |
| Reactive Hazard | No |

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

| Chemical name | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants | CWA - Hazardous Substances |
|---------------------------|--------------------------------|------------------------|---------------------------|-------------------------------|
| Methyl alcohol 67-56-1 | Not Established | Not Established | Not Established | Not Established |

| Ethyl alcohol | Not Established | Not Established | Not Established | Not Established |
|---------------|-----------------|-----------------|-----------------|-----------------|
| 64-17-5 | | | | |

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

| Chemical name | Hazardous Substances RQs | CERCLA/SARA RQ | RQ |
|---------------------------|--------------------------|-----------------|--|
| Methyl alcohol 67-56-1 | 5000 lb | Not Established | RQ 5000 lb final RQ RQ 2270 kg final RQ |
| Ethyl alcohol 64-17-5 | *- | Not Established | |

US State Regulations

California Proposition 65 WARNING! This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

(Ethyl alcohol is only considered a Proposition 65 cancer and developmental hazard when it is ingested as an alcoholic beverage).

| Chemical name | California Proposition 65 |
|---------------------------|---------------------------|
| Methyl alcohol 67-56-1 | Developmental |
| Ethyl alcohol 64-17-5 | Carcinogen |

U.S. State Right-to-Know Regulations

| Chemical name | New Jersey | Massachusetts | Pennsylvania |
|---------------------------|------------|---------------|--------------|
| Methyl alcohol 67-56-1 | X | x | x |
| Ethyl alcohol 64-17-5 | X | X | x |

CPSC (Consumer Product Safety Commission) - Specially Regulated Substances

| Chemical name | CI | Subst | Commission) - Specially Regulated tances |
|---------------------------|---|--|--|
| Methyl alcohol 67-56-1 | | Special labeling, | 16 CFR 1500.14 |
| | 16. OTHER INFO | RMATION | |
| Health hazard 1 | Flammability 3 | Instability 0 | Physical and Chemical Hazards N/A |
| | | | |
| | | | |
| Regulato | | t | |
| New US | GHS format | | |
| | Methyl alcohol 67-56-1 Health hazard 1 Flammability 3 Regulato Jul-06-20 New US | Methyl alcohol 67-56-1 16. OTHER INFO Health hazard 1 Flammability 3 Flammability 3 Stability 0 Regulatory Affairs Department Jul-06-2015 New US GHS format | Subsidies Methyl alcohol Special labeling, 67-56-1 16. OTHER INFORMATION Health hazard 1 Flammability 3 Instability 0 Flammability 3 Stability 0 Flammability 3 Stability 0 Regulatory Affairs Department Jul-06-2015 Subsidiation |

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and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of Safety Data Sheet

Component Methyl alcohol 67-56-1 (4) Ethyl alcohol 64-17-5 (92) California Proposition 65 Developmental

Carcinogen

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Issuing Date Apr-07-2015

Revision Date Jan-09-2017

Safety Data Sheet OSHA format Revision Number 1.01

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

| Product identifier | |
|-------------------------------|---|
| Product name | PHENOLPHTHALEIN INDICATOR 1% |
| Other means of identification | |
| Product Code(s) | 2246 |
| UN-No | 1170 |
| Recommended use of the c | chemical and restrictions on use |
| Recommended Use | Use as a laboratory reagent. Industrial (not for food or food contact use). Laboratory chemicals. |
| Details of the supplier of th | e safety data sheet |
| | Manufacturer Address |
| | LaMotte Company, Inc. |
| | 802 Washington Avenue |
| | P.O. Box 329 |

Chestertown, MD 21620 USA T 410-778-3100 F 410-778-9748

Emergency telephone numbers (CHEM-TEL):USA, Canada, Puerto Rico 1-800-255-3924 Outside North American Continent (Call collect) 813-248-0585

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2. HAZARDS IDENTIFICATION

| Serious eye damage/eye irritation | Category 2A |
|--|-------------|
| Germ cell mutagenicity | Category 1B |
| Carcinogenicity | Category 1A |
| Reproductive toxicity | Category 1A |
| Specific target organ toxicity (single exposure) | Category 3 |
| Specific target organ toxicity (repeated exposure) | Category 1 |
| Physical hazards Flammable Liquids. | Category 2 |

EMERGENCY OVERVIEW

DANGER

Hazard statements Causes serious eye irritation. May cause genetic defects. May cause cancer. May damage fertility or the unborn child. May cause respiratory irritation. May cause drowsiness or dizziness. Causes damage to organs through prolonged or repeated exposure. Highly flammable liquid and vapor.



Appearance Clear, colorless

Physical state liquid

Odor Alcohol

Precautionary Statements - Prevention

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Wash face, hands and any exposed skin thoroughly after handling. Wear eye/face protection. Do not breathe dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area.

Response: IF exposed or concerned: Get medical advice/attention.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do, Continue rinsing. If eye irritation persists: Get medical advice/attention. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash before reuse.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

IF SWALLOWED:. Drink 1 or 2 glasses of water. Call a physician immediately.

Storage:

Store locked up. Keep container tightly closed and in a well-ventilated place.

Disposal: Dispose of contents/container to an approved waste disposal plant.

Other Hazards

May be harmful if swallowed. Toxic to aquatic life with long lasting effects.

| 3. COMPOSITION/INFORMATION ON INGREDIENTS* | | |
|--|---------|----------|
| Chemical name | CAS No. | Weight-% |
| Phenolphthalein | 77-09-8 | <1 |
| Methyl alcohol | 67-56-1 | 3 |
| Ethyl alcohol | 64-17-5 | 58 |

4. FIRST AID MEASURES

| First Aid Measures | |
|------------------------------------|--|
| General advice | Do not get in eyes, on skin, or on clothing. If symptoms persist, call a physician. |
| Eye contact | Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician. |
| Skin contact | Wash off immediately with plenty of water for at least 15 minutes. Consult a physician if necessary. |
| Inhalation | IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing, Call a physician immediately. |
| Ingestion | Drink 1 or 2 glasses of water, Do not induce vomiting without medical advice. Call a physician immediately. Rinse mouth. |
| Self-protection of the first aider | Use personal protection recommended in Section 8. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid contact with eyes, skin and clothing. |

5. FIREFIGHTING MEASURES

Suitable extinguishing media Water spray. Dry chemical. Carbon dioxide (CO₂). Foam.

Protective equipment and precautions for firefighters As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

| | 6. ACCIDENTAL RELEASE MEASURES |
|----------------------------------|---|
| Personal precautions, protectiv | e equipment and emergency procedures |
| Personal precautions | Ensure adequate ventilation. Remove all sources of ignition. Use personal protection recommended in Section 8. |
| Environmental precautions | See Section 12 for additional Ecological Information. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas. |
| Methods and material for conta | inment and cleaning up |
| Methods for containment | Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container. Dispose of contents/containers in accordance with local regulations. |
| Methods for cleaning up | After cleaning, flush away traces with water. |
| athe | 7. HANDLING AND STORAGE |
| Precautions for safe handling | |
| Handling | Handle in accordance with good industrial hygiene and safety practice. Do not taste or swallow. Do not eat, drink or smoke when using this product. Avoid contact with skin, eye or clothing. |
| Conditions for safe storage, inc | luding any incompatibilities |
| Storage: | Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from open flames, hot surfaces and sources of ignition. Separate from acids. Keep away from oxidizing agents. Keep out of the reach of children. |
| | Page 3/9 |

Incompatible Products

NITRIC ACID. Strong oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

| | OSHA PEL | NIOSH IDLH |
|---|---|--|
| | | Not Established |
| STEL: 250 ppm | TWA: 200 ppm | IDLH: 6000 ppm |
| TWA: 200 ppm | TWA: 260 mg/m ³ | TWA: 200 ppm |
| | | TWA: 260 mg/m ³ |
| | | STEL: 250 ppm |
| | | STEL: 325 mg/m ³ |
| (| | |
| STEL: 1000 ppm | | IDLH: 3300 ppm |
| Creat tooo ppin | TWA: 1900 mg/m ³ | TWA: 1000 ppm |
| | vacated) TWA: 1000 ppm | TWA: 1900 mg/m ³ |
| | acated) TWA: 1900 mg/m ³ | |
| | | |
| Showers | | |
| Eyewash stations | | |
| Ventilation systems. | | |
| uch as personal protective equipme | ant | |
| Wear safety glasses with side shie | lds (or goggles). | |
| | | |
| | ciotning/eye protection/face | protection. Protective glov |
| Nitrile rubber. | | |
| Use only with adequate ventilation. | | |
| Do not eat, drink or smoke when u | sing this product. | |
| | | |
| 9. PHYSICAL AND CHEMICA | L PROPERTIES | |
| chemical properties | | |
| | | |
| liquid | | |
| liquid Clear, colorless | Odor | Alcohol |
| Clear, colorless | | Alcohol |
| | Odor <u>Remarks • Method</u> | Alcohol |
| Clear, colorless | | |
| Clear, colorless <u>Values</u> | Remarks • Method | |
| Clear, colorless <u>Values</u> No information available | Remarks • Method | |
| Clear, colorless <u>Values</u> No information available 78 °C / 172 °F for SDA (3A) Ethy | Remarks • Method | |
| Clear, colorless <u>Values</u> No information available 78 °C / 172 °F for SDA (3A) Ethy Alcohol | Remarks • Method No information availab | le |
| Clear, colorless <u>Values</u> No information available 78 °C / 172 °F for SDA (3A) Ethy | Remarks • Method No information availab | le |
| Clear, colorless <u>Values</u> No information available 78 °C / 172 °F for SDA (3A) Ethy Alcohol | Remarks • Method No information availab | |
| Clear, colorless <u>Values</u> No information available 78 °C / 172 °F for SDA (3A) Ethy Alcohol Not Applicable 22 °C / | Remarks • Method No information availab | le |
| Clear, colorless <u>Values</u> No information available 78 °C / 172 °F for SDA (3A) Ethy Alcohol | Remarks • Method No information availab | le |
| Clear, colorless <u>Values</u> No information available 78 °C / 172 °F for SDA (3A) Ethy Alcohol Not Applicable 22 °C / No information available | Remarks • Method No information availab | le |
| Clear, colorless <u>Values</u> No information available 78 °C / 172 °F for SDA (3A) Ethy Alcohol Not Applicable 22 °C / No information available 19 | Remarks • Method No information availab | le |
| Clear, colorless <u>Values</u> No information available 78 °C / 172 °F for SDA (3A) Ethy Alcohol Not Applicable 22 °C / No information available 19 3.3 | Remarks • Method No information available (Calculated based on p (based on .?) | e percent denatured alcohol |
| Clear, colorless <u>Values</u> No information available 78 °C / 172 °F for SDA (3A) Ethy Alcohol Not Applicable 22 °C / No information available 19 3.3 No information available | Remarks • Method No information availab | e percent denatured alcohol |
| Clear, colorless <u>Values</u> No information available 78 °C / 172 °F for SDA (3A) Ethy Alcohol Not Applicable 22 °C / No information available 19 3.3 No information available No information available | Remarks • Method No information available (Calculated based on p (based on .?) | e percent denatured alcohol |
| Clear, colorless <u>Values</u> No information available 78 °C / 172 °F for SDA (3A) Ethy Alcohol Not Applicable 22 °C / No information available 19 3.3 No information available No information available No information available No information available | Remarks • Method No information available (Calculated based on p (based on .?) | e percent denatured alcohol) |
| Clear, colorless <u>Values</u> No information available 78 °C / 172 °F for SDA (3A) Ethy Alcohol Not Applicable 22 °C / No information available 19 3.3 No information available No information available No information available No information available No information available | Remarks • Method No information available (Calculated based on p (based on .?) | e percent denatured alcohol |
| Clear, colorless <u>Values</u> No information available 78 °C / 172 °F for SDA (3A) Ethy Alcohol Not Applicable 22 °C / No information available 19 3.3 No information available No information available No information available No information available | Remarks • Method No information available (Calculated based on p (based on .?) | e percent denatured alcohol |
| | S* (1) STEL: 1000 ppm (1) STEL: 1000 ppm (1) Showers Eyewash stations Ventilation systems. Uch as personal protective equipment Wear safety glasses with side shie Wear protective gloves/protective of Nitrile rubber. Use only with adequate ventilation. Do not eat, drink or smoke when u 9. PHYSICAL AND CHEMICA | S* (vacated) TWA: 200 ppm (vacated) TWA: 260 mg/m³ (vacated) STEL: 250 ppm (vacated) STEL: 325 mg/m³ (vacated) STEL: 325 mg/m³ (vacated) S* STEL: 1000 ppm TWA: 1000 ppm TWA: 1900 mg/m³ (vacated) TWA: 1000 ppm (vacated) TWA: 1900 mg/m³ Showers Eyewash stations Ventilation systems. uch as personal protective equipment Wear safety glasses with side shields (or goggles). Wear protective gloves/protective clothing/eye protection/face Nitrile rubber. |

| Partition coefficient | No information available |
|---------------------------|--------------------------|
| Autoignition temperature | No information available |
| Decomposition temperature | No information available |
| Kinematic viscosity | No information available |
| Dynamic viscosity | No information available |
| Explosive properties | No information available |
| Oxidizing properties | No information available |
| Other Information | |
| Softening point | No information available |
| Molecular weight | No information available |
| VOC Content (%) | No information available |
| Density | No information available |
| Bulk density | No information available |

10. STABILITY AND REACTIVITY

Stable under recommended storage conditions. Stability Hazardous polymerization Hazardous polymerization does not occur. **Conditions** to avoid Heat, flames and sparks. NITRIC ACID. Strong oxidizing agents. Incompatible materials

Hazardous decomposition products Carbon oxides (COx).

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Component identification

| Chemical name | ATEmix (oral) | ATEmix (dermal) | Inhalation LC50 |
|----------------------------|--------------------|------------------------|--|
| Phenolphthalein 77-09-8 | Not Established | Not Established | Not Established |
| Methyl alcohol 67-56-1 | = 6200 mg/kg (Rat) | = 15800 mg/kg (Rabbit) | = 64000 ppm (Rat) 4 h = 22500 ppm (Rat) 8 h |
| Ethyl alcohol 64-17-5 | = 7060 mg/kg (Rat) | Not Established | = 124.7 mg/L (Rat) 4 h |

 Information on toxicological effects

 Carcinogenicity
 The table below indicates whether each agency has listed any ingredient as a carcinogen.

 NTP
 OSHA

| Chemical name | ACOIN | IARC | NIF | USHA |
|----------------------------|-----------------|-----------------|------------------------|-----------------|
| Phenolphthalein 77-09-8 | Not Established | Group 2B | Reasonably Anticipated | x |
| Methyl alcohol 67-56-1 | Not Established | Not Established | Not Established | Not Established |
| Ethyl alcohol 64-17-5 | A3 | Group 1 | Known | x |

Group 2B - Possibly Carcinogenic to Humans

Known - Known Carcinogen Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

X - Present **Chronic toxicity**

Ethanol has been shown to be a reproductive toxin only when consumed as an alcoholic beverage. Prolonged skin contact may cause skin irritation and/or dermatitis.

ATEmix (oral) ATEmix (dermal) ATEmix (inhalation-dust/mist) 3,546.00 mg/kg 10,638.00 mg/kg 17.77 mg/l

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12. ECOLOGICAL INFORMATION

Ecotoxicity

Toxic to aquatic life with long lasting effects

| Chemical name | Toxicity to Algae | Toxicity to Fish | Daphnia Magna (Water Flea) |
|----------------------------|-------------------|--|--|
| Phenolphthalein 77-09-8 | Not Established | Not Established | Not Established |
| Methyl alcohol 67-56-1 | Not Established | 13500 - 17600: 96 h Lepomis macrochirus mg/L LC50 flow-through 18 - 20: 96 h Oncorhynchus mykiss mL/L LC50 static 19500 - 20700: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 28200: 96 h Pimephales promelas mg/L LC50 flow-through 100: 96 h Pimephales promelas mg/L LC50 static | |
| Ethyl alcohol 64-17-5 | Not Established | 12.0 - 16.0: 96 h Oncorhynchus mykiss mL/L LC50 static 13400 - 15100: 96 h Pimephales promelas mg/L LC50 flow-through 100: 96 h Pimephales promelas mg/L LC50 static | 9268 - 14221: 48 h Daphnia magna mg/L LC50 10800: 24 h Daphnia magna mg/L EC50 2: 4 h Daphnia magna mg/L EC50 Static |

Persistence and degradability Ethanol: When released into the soil, this material is expected to leach into groundwater. When released into the soil, this material is expected to quickly evaporate. When released into water, this material may evaporate to a moderate extent. When released into the air, this material is expected to be readily degraded by reaction with photochemically produced hydroxyl radicals. When released into the air, this material is expected to be readily removed from the atmosphere by dry and wet deposition. When released into the air, this material is expected to have a half-life between 1 and 10 days.

Bioaccumulation/Accumulation

| Chemical name | Log Pow |
|----------------------------|-----------------|
| Phenolphthalein 77-09-8 | Not Established |
| Methyl alcohol 67-56-1 | -0.77 |
| Ethyl alcohol 64-17-5 | -0.32 |

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Dispose of waste product or used containers according to local regulations.

Contaminated packaging

Do not reuse empty containers.

| Chemical name | RCRA | RCRA - Basis for Listing | RCRA - D Series Wastes | RCRA - U Series Wastes |
|----------------------------|-----------------|-----------------------------------|------------------------|------------------------|
| Phenolphthalein 77-09-8 | Not Established | - | Not Established | Not Established |
| Methyl alcohol 67-56-1 | Not Established | Included in waste stream: F039 | Not Established | U154 |
| Ethyl alcohol 64-17-5 | Not Established | - | Not Established | Not Established |

| Chemical name | RCRA - Halogenated Organic Compounds | RCRA - P Serles Wastes | RCRA - F Series Wastes | RCRA - K Serles Wastes |
|----------------------------|---|------------------------|------------------------|------------------------|
| Phenolphthalein 77-09-8 | Not Established | Not Established | Not Established | Not Established |
| Methyl alcohol | Not Established | Not Established | Not Established | Not Established |

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2246 *- PHENOLPHTHALEIN INDICATOR 1%

Issuing Date Apr-07-2015 Revision Date Jan-09-2017

| 67-56-1 | | | | | |
|---|---------------|-----------------|---|-------------|--|
| Ethyl alcohol Not Established Not Es 64-17-5 | | Not Established | Established Not Established Not Establish | | |
| | Chemical name | | California Hazardous Wa | aste Status | |
| Phenolphthalein 77-09-8 | | | *- | | |
| Methyl alcohol 67-56-1 | | | Toxic Ignitable | | |
| Ethyl alcohol 64-17-5 | | | Toxic Ignitable | | |

14. TRANSPORT INFORMATION

| 15. REGULATORY INFORMATION |
|---|
| |
| Not regulated |
| П |
| 3 |
| ETHANOL / ETHYL ALCOHOL SOLUTION |
| 1170 |
| |
| 5 II |
| 3 |
| 1170 ETHANOL / ETHYL ALCOHOL SOLUTION |
| 1170 |
| П |
| 3 |
| ETHANOL SOLUTION |
| 1170 |
| |
| П |
| 3 |
| ETHANOL / ETHYL ALCOHOL SOLUTION |
| 1170 |
| Not regulated |
| Not regulated |
| Not regulated |
| |
| 3 |
| 1170 3 |
| ETHANOL SOLUTION (Ethyl Alcohol Solution) |
| |

TSCACompliesDSL/NDSLCompliesEINECS/ELINCSCompliesENCSCompliesIECSCCompliesKECLCompliesPICCSComplies

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AICS

Complies

Legend: TSCA - United States Toxic Substances Control Act Section 8(b) Inventory DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

| Chemical name | SARA 313 - Threshold Values % |
|--------------------------------|-------------------------------|
| Phenolphthalein 77-09-8 | 0.1 |
| Methyl alcohol 67-56-1 | 1.0 |
| Ethyl alcohol 64-17-5 | Not Established |
| SARA 311/312 Hazard Categories | |
| Acute health hazard | Yes |
| Chronic Health Hazard | Yes |
| Fire hazard | Yes |

No No

Reactive Hazard

Sudden release of pressure hazard

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

| Chemical name | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants | CWA - Hazardous Substances |
|----------------------------|--------------------------------|------------------------|---------------------------|-------------------------------|
| Phenolphthalein 77-09-8 | Not Established | Not Established | Not Established | Not Established |
| Methyl alcohol 67-56-1 | Not Established | Not Established | Not Established | Not Established |
| Ethyl alcohol 64-17-5 | Not Established | Not Established | Not Established | Not Established |

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

| Chemical name | Hazardous Substances RQs | CERCLA/SARA RQ | RQ |
|----------------------------|--------------------------|-----------------|--|
| Phenolphthalein 77-09-8 | | Not Established | - |
| Methyl alcohol 67-56-1 | 5000 lb | Not Established | RQ 5000 lb final RQ RQ 2270 kg final RQ |
| Ethyl alcohol 64-17-5 | *_ | Not Established | |

US State Regulations

California Proposition 65 WARNING! This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

(Ethyl alcohol is only considered a Proposition 65 cancer and developmental hazard when it is ingested as an alcoholic beverage).



| Chemical name | California Proposition 65 |
|----------------------------|---------------------------|
| Phenolphthalein 77-09-8 | Carcinogen |
| Methyl alcohol 67-56-1 | Developmental |
| Ethyl alcohol 64-17-5 | Carcinogen |

U.S. State Right-to-Know Regulations

| Chemical name | New Jersey | Massachusetts | Pennsylvania |
|----------------------------|------------|-----------------|-----------------|
| Phenolphthalein 77-09-8 | X | Not Established | Not Established |
| Methyl alcohol 67-56-1 | x | х | X |
| Ethyl alcohol 64-17-5 | X | Х | X |

CPSC (Consumer Product Safety Commission) - Specially Regulated Substances

| | Chemical name | CPSC (Consumer Product Safety Commission) - Specially Regulated Substances |
|--|--|--|
| | Methyl alcohol 67-56-1 | Special labeling, 16 CFR 1500.14 |
| | | FORMATION |
| NFPA | Health hazard 1 Flammabilit | y 3 Instability 0 Physical and Chemical Hazards N/A |
| lealth hazard 2 | Flammability 3 | |
| FLAMMABILITY REACTIVITY Prepared by ssuing Date | 3 Regulatory Affairs Departs Apr-07-2015 | ment |
| Revision Date Reason for revision Disclaimer | Jan-09-2017 SDS was reviewed per Ca | anada request. Issue date and revision date were incorrect |
| The information provid The information given and is not to be consid | is designed only as a guide for safe handlir ered as a warranty or quality specification. | knowledge, information and belief at the date of its publication. ng, use, processing, storage, transportation, disposal and release The information relates only to the specific material designated any other material or in any process, unless specified in the text. |
| | End of Safet | ty Data Sheet |
| Component Thenolphthalein 77-09-8 (<1) | | California Proposition 65 Carcinogen |
| Aethyl alcohol | | Developmental |

77-09-8 (<1) Methyl alcohol 67-56-1 (3) Ethyl alcohol 64-17-5 (58)

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Carcinogen



Safety Data Sheet

Revision Number 0

Issuing Date Jan-10-2017

Revision Date Dec-15-2016

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

| Product identifier | |
|--------------------------------|---|
| Product name | PHENOLPHTHALEIN INDICATOR 0.5% |
| Other means of identification | on |
| Product Code(s) | 2258 |
| UN-No | 1170 |
| Recommended use of the c | chemical and restrictions on use |
| Recommended Use | Use as a laboratory reagent. Industrial (not for food or food contact use). Laboratory chemicals. |
| Details of the supplier of the | e safety data sheet |
| | Manufacturer Address |
| | Lablatta Campany Inc. |

LaMotte Company, Inc. 802 Washington Avenue P.O. Box 329 Chestertown, MD 21620 USA T 410-778-3100 F 410-778-9748

Emergency telephone numbers (CHEM-TEL):USA, Canada, Puerto Rico 1-800-255-3924 Outside North American Continent (Call collect) 813-248-0585

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2. HAZARDS IDENTIFICATION

| Serious eye damage/eye irritation | Category 2A | |
|--|-------------|--|
| Germ cell mutagenicity | Category 1B | |
| Carcinogenicity | Category 1A | |
| Reproductive toxicity | Category 1A | |
| Specific target organ toxicity (single exposure) | Category 3 | |
| Specific target organ toxicity (repeated exposure) | Category 1 | |
| Physical hazards Flammable Liquids. | Category 2 | |

EMERGENCY OVERVIEW

DANGER

Hazard statements Causes serious eye irritation. May cause genetic defects. May cause cancer. May damage fertility or the unborn child. May cause respiratory irritation. May cause drowsiness or dizziness. Causes damage to organs through prolonged or repeated exposure. Highly flammable liquid and vapor.



Appearance Clear, colorless

Physical state liquid

Odor Alcohol

Precautionary Statements - Prevention

Do not handle until all safety precautions have been read and understood. Wear eye/face protection. Wash face, hands and any exposed skin thoroughly after handling. Do not breathe dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area.

Response: IF exposed or concerned: Get medical advice/attention.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash before reuse.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

IF SWALLOWED:. Drink 1 or 2 glasses of water. Call a physician immediately.

Storage:

Store locked up. Keep container tightly closed and in a well-ventilated place.

Disposal:

Dispose of contents/container to an approved waste disposal plant.

Other Hazards May be harmful if swallowed. Toxic to aquatic life with long lasting effects.

3. COMPOSITION/INFORMATION ON INGREDIENTS*

| Chemical name | CAS No. | Weight-% |
|-----------------|---------|----------|
| Phenolphthalein | 77-09-8 | <1 |
| Methyl alcohol | 67-56-1 | 3 |
| Ethyl alcohol | 64-17-5 | 58 |

4. FIRST AID MEASURES

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| 5. FIREFIGHTING MEASURES |
|--|
| Use personal protection recommended in Section 8. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid contact with eyes, skin and clothing. |
| Drink 1 or 2 glasses of water. Do not induce vomiting without medical advice. Call a physician immediately. Rinse mouth. |
| IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Call a physician immediately. |
| Wash off immediately with plenty of water for at least 15 minutes. Consult a physician if necessary. |
| Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids Consult a physician. |
| Do not get in eyes, on skin, or on clothing. If symptoms persist, call a physician. |
| |
| |

Suitable extinguishing media Water spray. Dry chemical. Carbon dioxide (CO2). Foam.

Protective equipment and precautions for firefighters As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

| | 6. ACCIDENTAL RELEASE MEASURES |
|----------------------------------|---|
| Personal precautions, protectiv | e equipment and emergency procedures |
| Personal precautions | Ensure adequate ventilation. Remove all sources of ignition. Use personal protection recommended in Section 8. |
| Environmental precautions | See Section 12 for additional Ecological Information. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas. |
| Methods and material for conta | inment and cleaning up |
| Methods for containment | Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container. Dispose of contents/containers in accordance with local regulations. |
| Methods for cleaning up | After cleaning, flush away traces with water. |
| 100 | 7. HANDLING AND STORAGE |
| Precautions for safe handling | |
| Handling | Handle in accordance with good industrial hygiene and safety practice. Do not taste or swallow. Do not eat, drink or smoke when using this product. Avoid contact with skin, eye or clothing. |
| Conditions for safe storage, inc | luding any incompatibilities |
| Storage: | Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from open flames, hot surfaces and sources of ignition. Separate from acids. Keep away from oxidizing agents. Keep out of the reach of children. |

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Incompatible Products

NITRIC ACID. Strong oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

| Chemical name | ACGIH TLV | OSHA PEL | NIOSH IDLH |
|--|---|--|--|
| Phenolphthalein 77-09-8 | * | * | Not Established |
| Methyl alcohol 67-56-1 | 0 | TWA: 200 ppm TWA: 260 mg/m ³ (vacated) TWA: 200 ppm vacated) TWA: 260 mg/m ³ (vacated) STEL: 250 ppm vacated) STEL: 325 mg/m ³ (vacated) S* | IDLH: 6000 ppm TWA: 200 ppm TWA: 260 mg/m ³ STEL: 250 ppm STEL: 325 mg/m ³ |
| Ethyl alcohol 64-17-5 | | TWA: 1000 ppm TWA: 1900 mg/m ³ (vacated) TWA: 1000 ppm vacated) TWA: 1900 mg/m ³ | IDLH: 3300 ppm TWA: 1000 ppm TWA: 1900 mg/m ³ |
| ppropriate engineering control | 5 | | |
| ingineering Measures | Showers Eyewash stations Ventilation systems. | | |
| ndividual protection measures, | such as personal protective equipme | ent | |
| ye/Face Protection | Wear safety glasses with side shie | lds (or goggles). | |
| ikin and body protection | Wear protective gloves/protective on Nitrile rubber. | clothing/eye protection/face | protection. Protective glov |
| | Use only with adequate ventilation. | | |
| Respiratory protection | Use only with adequate ventilation. | | |
| Respiratory protection Hygiene Measures | Do not eat, drink or smoke when u | sing this product. | |
| Hygiene Measures | Do not eat, drink or smoke when us 9. PHYSICAL AND CHEMICA | sing this product. | |
| hygiene Measures | Do not eat, drink or smoke when us 9. PHYSICAL AND CHEMICA ad chemical properties | sing this product. | |
| hygiene Measures Information on basic physical an Physical state | Do not eat, drink or smoke when us 9. PHYSICAL AND CHEMICA | sing this product. | Alcohol |
| Hygiene Measures Information on basic physical an Physical state Appearance | Do not eat, drink or smoke when us 9. PHYSICAL AND CHEMICA ad chemical properties liquid | sing this product. | Alcohol |
| Hygiene Measures Information on basic physical an Physical state Appearance Property | Do not eat, drink or smoke when us 9. PHYSICAL AND CHEMICA ad chemical properties liquid Clear, colorless | sing this product. L PROPERTIES Odor Remarks • Method | |
| Hygiene Measures Information on basic physical an Physical state Appearance Property pH Melting point / freezing point | Do not eat, drink or smoke when us 9. PHYSICAL AND CHEMICA ad chemical properties liquid Clear, colorless | sing this product. L PROPERTIES Odor <u>Remarks • Method</u> No information availab | |
| Hygiene Measures nformation on basic physical an Physical state Appearance | Do not eat, drink or smoke when us 9. PHYSICAL AND CHEMICA ad chemical properties liquid Clear, colorless Values No information available 78 °C / 172 °F for SDA (3A) Ethy | sing this product. L PROPERTIES Odor <u>Remarks • Method</u> No information availab | |
| Aygiene Measures Information on basic physical an Physical state Appearance Property pH Melting point / freezing point Boiling point / boiling range Flash point Evaporation rate | Do not eat, drink or smoke when us 9. PHYSICAL AND CHEMICA ad chemical properties liquid Clear, colorless Values No information available 78 °C / 172 °F for SDA (3A) Ethy Alcohol Not Applicable 22 °C / | sing this product. L PROPERTIES Odor <u>Remarks • Method</u> No information available vi (Calculated based on p | e |
| Aygiene Measures | Do not eat, drink or smoke when us 9. PHYSICAL AND CHEMICA ad chemical properties liquid Clear, colorless Values No information available 78 °C / 172 °F for SDA (3A) Ethy Alcohol | sing this product. L PROPERTIES Odor <u>Remarks • Method</u> No information available vi (Calculated based on p | e |
| Aygiene Measures Information on basic physical an Physical state Appearance Property OH Melting point / freezing point Boiling point / boiling range Flash point Evaporation rate Flammability (solid, gas) Flammability Limit in Air | Do not eat, drink or smoke when us 9. PHYSICAL AND CHEMICA ad chemical properties liquid Clear, colorless Values No information available 78 °C / 172 °F for SDA (3A) Ethy Alcohol Not Applicable 22 °C / No information available | sing this product. L PROPERTIES Odor <u>Remarks • Method</u> No information available vi (Calculated based on p | e |
| Aygiene Measures Information on basic physical an Physical state Appearance Property OH Melting point / freezing point Boiling point / boiling range Flash point Evaporation rate Flammability (solid, gas) Flammability Limit in Air Upper flammability limit: | Do not eat, drink or smoke when us 9. PHYSICAL AND CHEMICA d chemical properties liquid Clear, colorless Values No information available 78 °C / 172 °F for SDA (3A) Ethy Alcohol Not Applicable 22 °C / No information available 19 | sing this product. L PROPERTIES Odor <u>Remarks • Method</u> No information available vi (Calculated based on p | e |
| Aygiene Measures Information on basic physical an Physical state Appearance Property OH Melting point / freezing point Boiling point / boiling range Flash point Evaporation rate Flammability (solid, gas) Flammability Limit in Air Upper flammability limit: Lower flammability limit: | Do not eat, drink or smoke when us 9. PHYSICAL AND CHEMICA d chemical properties liquid Clear, colorless Values No information available 78 °C / 172 °F for SDA (3A) Ethy Alcohol Not Applicable 22 °C / No information available 19 3.3 | sing this product. L PROPERTIES Odor <u>Remarks • Method</u> No information available (Calculated based on p (based on .?) | e ercent denatured alcohol) |
| Aygiene Measures Information on basic physical an Physical state Appearance Property pH Melting point / freezing point Boiling point / boiling range Flash point Evaporation rate Flammability (solid, gas) Flammability Limit in Air Upper flammability limit: Lower flammability limit: Vapor pressure | Do not eat, drink or smoke when us 9. PHYSICAL AND CHEMICA d chemical properties liquid Clear, colorless Values No information available 78 °C / 172 °F for SDA (3A) Ethy Alcohol Not Applicable 22 °C / No information available 19 3.3 No information available | sing this product. L PROPERTIES Odor <u>Remarks • Method</u> No information available vi (Calculated based on p | e ercent denatured alcohol) |
| Aygiene Measures Information on basic physical an Physical state Appearance Property pH Melting point / freezing point Boiling point / boiling range Flash point Evaporation rate Flammability (solid, gas) Flammability Limit in Air Upper flammability limit: Lower flammability limit: Apor pressure fapor density | Do not eat, drink or smoke when us 9. PHYSICAL AND CHEMICA d chemical properties liquid Clear, colorless Values No information available 78 °C / 172 °F for SDA (3A) Ethy Alcohol Not Applicable 22 °C / No information available 19 3.3 No information available No information available No information available No information available | sing this product. L PROPERTIES Odor <u>Remarks • Method</u> No information available (Calculated based on p (based on .?) | e ercent denatured alcohol) |
| Aygiene Measures | Do not eat, drink or smoke when us 9. PHYSICAL AND CHEMICA d chemical properties liquid Clear, colorless Values No information available 78 °C / 172 °F for SDA (3A) Ethy Alcohol Not Applicable 22 °C / No information available 19 3.3 No information available | sing this product. L PROPERTIES Odor <u>Remarks • Method</u> No information available (Calculated based on p (based on .?) | e ercent denatured alcohol) |
| Aygiene Measures Information on basic physical an Physical state Appearance Property pH Melting point / freezing point Boiling point / boiling range Flash point Evaporation rate Flammability (solid, gas) Flammability Limit in Air Upper flammability limit: Lower flammability limit: Lower flammability limit: /apor pressure /apor density Specific gravity Vater solubility | Do not eat, drink or smoke when us 9. PHYSICAL AND CHEMICA d chemical properties liquid Clear, colorless Values No information available 78 °C / 172 °F for SDA (3A) Ethy Alcohol Not Applicable 22 °C / No information available 19 3.3 No information available | sing this product. L PROPERTIES Odor <u>Remarks • Method</u> No information available (Calculated based on p (based on .?) | e ercent denatured alcohol) |
| Aygiene Measures Information on basic physical an Physical state Appearance Property pH Melting point / freezing point Boiling point / boiling range Flash point Evaporation rate Flammability (solid, gas) Flammability Limit in Air Upper flammability limit: Lower flammability limit: Lower flammability limit: /apor pressure /apor density Specific gravity | Do not eat, drink or smoke when us 9. PHYSICAL AND CHEMICA d chemical properties liquid Clear, colorless Values No information available 78 °C / 172 °F for SDA (3A) Ethy Alcohol Not Applicable 22 °C / No information available 19 3.3 No information available | sing this product. L PROPERTIES Odor <u>Remarks • Method</u> No information available (Calculated based on p (based on .?) | e ercent denatured alcohol) |

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| | 10. STABILITY AND REACTIVITY |
|---------------------------|------------------------------|
| Bulk density | No information available |
| Density | No information available |
| VOC Content (%) | No information available |
| Molecular weight | No information available |
| Softening point | No information available |
| Other Information | |
| Oxidizing properties | No information available |
| Explosive properties | No information available |
| Dynamic viscosity | No information available |
| Kinematic viscosity | No information available |
| Decomposition temperature | No information available |
| Autoignition temperature | No information available |

| Stability Hazardous polymerization | Stable under recommended storage conditions. Hazardous polymerization does not occur. |
|---------------------------------------|--|
| Conditions to avoid | Heat, flames and sparks. |
| Incompatible materials | NITRIC ACID. Strong oxidizing agents. |

Hazardous decomposition products Carbon oxides (COx).

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

| cation |
|--------|
| (|

| Chemical name | ATEmix (oral) | ATEmix (dermal) | Inhalation LC50 |
|----------------------------|--------------------|------------------------|--|
| Phenolphthalein 77-09-8 | Not Established | Not Established | Not Established |
| Methyl alcohol 67-56-1 | = 6200 mg/kg (Rat) | = 15800 mg/kg (Rabbit) | = 64000 ppm (Rat) 4 h = 22500 ppm (Rat) 8 h |
| Ethyl alcohol 64-17-5 | = 7060 mg/kg(Rat) | Not Established | = 124.7 mg/L (Rat) 4 h |

Information on toxicological effects

The table below indicates whether each agency has listed any ingredient as a carcinogen. Carcinogenicity

| Chemical name | ACGIH | IARC | NTP | OSHA |
|----------------------------|-----------------|-----------------|------------------------|-----------------|
| Phenolphthalein 77-09-8 | Not Established | Group 2B | Reasonably Anticipated | x |
| Methyl alcohol 67-56-1 | Not Established | Not Established | Not Established | Not Established |
| Ethyl alcohol 64-17-5 | A3 | Group 1 | Known | x |

Group 2B - Possibly Carcinogenic to Humans

Known - Known Carcinogen Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

X - Present Chronic toxicity

Ethanol has been shown to be a reproductive toxin only when consumed as an alcoholic beverage. Prolonged skin contact may cause skin irritation and/or dermatitis.

| ATEmix (oral) | 3,546.00 mg/kg |
|-------------------------------|-----------------|
| ATEmix (dermal) | 10,638.00 mg/kg |
| ATEmix (inhalation-dust/mist) | 17.77 mg/l |

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12. ECOLOGICAL INFORMATION

Ecotoxicity

Toxic to aquatic life with long lasting effects

| Chemical name | Toxicity to Algae | Toxicity to Fish | Daphnia Magna (Water Flea) |
|----------------------------|-------------------|--|----------------------------|
| Phenolphthalein 77-09-8 | Not Established | Not Established | Not Established |
| Methyl alcohol 67-56-1 | Not Established | 13500 - 17600: 96 h Lepomis macrochirus mg/L LC50 flow-through 18 - 20: 96 h Oncorhynchus mykiss mL/L LC50 static 19500 - 20700: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 28200: 96 h | Not Established |

| | | Pimephales promelas mg/L LC50 flow-through 100: 96 h Pimephales promelas mg/L LC50 static | |
|--------------------------|-----------------|---|---|
| Ethyl alcohol 64-17-5 | Not Established | 12.0 - 16.0: 96 h Oncorhynchus mykiss mL/L LC50 static 13400 - 15100: 96 h Pimephales promelas mg/L LC50 flow-through 100: 96 h Pimephales promelas mg/L LC50 static | 9268 - 14221: 48 h Daphnia magna mg/L LC50 10800: 24 h Daphnia magna mg/L EC50 2: 48 h Daphnia magna mg/L EC50 Static |

Persistence and degradability Ethanol: When released into the soil, this material is expected to leach into groundwater. When released into the soil, this material is expected to quickly evaporate. When released into water, this material may evaporate to a moderate extent. When released into the air, this material is expected to be readily degraded by reaction with photochemically produced hydroxyl radicals. When released into the air, this material is expected to be readily removed from the atmosphere by dry and wet deposition. When released into the air, this material is expected to have a half-life between 1 and 10 days.

Bioaccumulation/Accumulation For .? :.

| Chemical name | Log Pow |
|----------------------------|-----------------|
| Phenolphthalein 77-09-8 | Not Established |
| Methyl alcohol 67-56-1 | -0.77 |
| Ethyl alcohol 64-17-5 | -0.32 |

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Dispose of waste product or used containers according to local regulations.

Contaminated packaging

Do not reuse empty containers.

| Chemical name | RCRA | RCRA - Basis for Listing | RCRA - D Series Wastes | RCRA - U Series Wastes |
|----------------------------|-----------------|-----------------------------------|-------------------------------|-------------------------------|
| Phenolphthalein 77-09-8 | Not Established | - | Not Established | Not Established |
| Methyl alcohol 67-56-1 | Not Established | Included in waste stream: F039 | Not Established | U154 |
| Ethyl alcohol 64-17-5 | Not Established | - | Not Established | Not Established |

| Chemical name | RCRA - Halogenated Organic Compounds | RCRA - P Series Wastes | RCRA - F Series Wastes | RCRA - K Series Wastes |
|----------------------------|---|------------------------|------------------------|------------------------|
| Phenolphthalein 77-09-8 | Not Established | Not Established | Not Established | Not Established |
| Methyl alcohol | Not Established | Not Established | Not Established | Not Established |

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2258 *- PHENOLPHTHALEIN INDICATOR 0.5%

Issuing Date Jan-10-2017

| 67-56-1 Ethyl alcohol 64-17-5 | Not Established | Not Established | Not Established | Not Established |
|-------------------------------------|-----------------|-----------------|-------------------------|-----------------|
| - | Chemical name | | California Hazardous Wa | aste Status |
| Phenolphthalein 77-09-8 | | | *- | |
| Methyl alcohol 67-56-1 | | | Toxic Ignitable | |
| Ethyl alcohol 64-17-5 | | | Toxic Ignitable | |

14. TRANSPORT INFORMATION

| Proper shipping name Hazard Class Packing group | ETHANOL / ETHYL ALCOHOL SOLUTION 3 II | |
|--|---|--|
| IMDG/IMO UN-No Proper shipping name Hazard Class Packing group | 1170 ETHANOL SOLUTION 3 II | |
| <u>RID</u> UN-No Proper shipping name Hazard Class Packing group | 1170 ETHANOL / ETHYL ALCOHOL SOLUTION 3 II | |
| ADR UN-No Proper shipping name Hazard Class Packing group | 1170 ETHANOL / ETHYL ALCOHOL SOLUTION 3 II | |
| ADN | Not regulated | |
| | 15. REGULATORY INFORMATION | |
| International Inventories TSCA DSL/NDSL EINECS/ELINCS ENCS IECSC KECL PICCS | Does not comply Complies Complies Complies Complies Complies Complies | |
| | Page 7/9 | |

AICS

Complies

Legend: TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

| Chemical name | SARA 313 - Threshold Values % |
|----------------------------|-------------------------------|
| Phenolphthalein 77-09-8 | 0.1 |
| Methyl alcohol 67-56-1 | 1.0 |
| Ethyl alcohol 64-17-5 | Not Established |

| ວ, | AKA 311/312 Hazard Categories | |
|----|-----------------------------------|-----|
| | Acute health hazard | Yes |
| | Chronic Health Hazard | Yes |
| | Fire hazard | Yes |
| | Sudden release of pressure hazard | No |
| | Reactive Hazard | No |

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

| Chemical name | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants | CWA - Hazardous Substances |
|----------------------------|--------------------------------|------------------------|---------------------------|-------------------------------|
| Phenolphthalein 77-09-8 | Not Established | Not Established | Not Established | Not Established |
| Methyl alcohol 67-56-1 | Not Established | Not Established | Not Established | Not Established |
| Ethyl alcohol 64-17-5 | Not Established | Not Established | Not Established | Not Established |

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

| Chemical name | Hazardous Substances RQs | CERCLA/SARA RQ | RQ |
|----------------------------|--------------------------|-----------------|--|
| Phenolphthalein 77-09-8 | | Not Established | - |
| Methyl alcohol 67-56-1 | 5000 lb | Not Established | RQ 5000 lb final RQ RQ 2270 kg final RC |
| Ethyl alcohol 64-17-5 | *_ | Not Established | |

US State Regulations

California Proposition 65 WARNING! This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

(Ethyl alcohol is only considered a Proposition 65 cancer and developmental hazard when it is ingested as an alcoholic beverage).



| Chemical name | California Proposition 65 |
|----------------------------|---------------------------|
| Phenolphthalein 77-09-8 | Carcinogen |
| Methyl alcohol 67-56-1 | Developmental |
| Ethyl alcohol 64-17-5 | Carcinogen |

U.S. State Right-to-Know Regulations

| Chemical name | New Jersey | Massachusetts | Pennsylvania |
|----------------------------|------------|-----------------|-----------------|
| Phenolphthalein 77-09-8 | X | Not Established | Not Established |
| Methyl alcohol 67-56-1 | X | X | x |
| Ethyl alcohol 64-17-5 | X | X | x |

CPSC (Consumer Product Safety Commission) - Specially Regulated Substances

| | Chemical name | Su | ety Commission) - Specially Regulated | | |
|--|------------------------------|-----------------|---------------------------------------|--|--|
| | Methyl alcohol 67-56-1 | Special labeli | ng, 16 CFR 1500.14 | | |
| 16. OTHER INFORMATION | | | | | |
| IFPA | Health hazard 1 Flammability | 3 Instability 0 | Physical and Chemical Hazards N/A | | |
| lealth hazard 2 | Flammability 3 | | hazarus N/A | | |
| 2 | | | | | |
| HEALTH FLAMMABILITY REACTIVITY | 2 3 | | | | |
| repared by | Regulatory Affairs Departm | ent | | | |
| ssuing Date | Jan-10-2017 | | | | |
| | Dec-15-2016 | | | | |
| evision Date | SDS sections updated 14 | | | | |
| levision Date leason for revision lisclaimer | | | | | |

End of Safety Data Sheet

Component Phenolphthalein 77-09-8 (<1) Methyl alcohol 67-56-1 (3) Ethyl alcohol 64-17-5 (1.8)

California Proposition 65 Carcinogen Developmental Carcinogen

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Safety Data Sheet

OSHA format **Revision Number** 0

Issuing Date Nov-29-2

Revision Date Feb-12-2016

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier WIDE RANGE SOIL INDICATOR Product name Other means of identification 5070 Product Code(s) Recommended use of the chemical and restrictions on use Recommended Use Laboratory chemicals. Industrial (not for food or food contact use). Details of the supplier of the safety data sheet Manufacturer Address LaMotte Company, Inc. 802 Washington Avenue P.O. Box 329 Chestertown, MD 21620 USA T 410-778-3100 F 410-778-9748 Emergency telephone numbers (CHEM-TEL):USA, Canada, Puerto Rico 1-800-255-3924 Outside North American Continent (Call collect) 813-248-0585

2. HAZARDS IDENTIFICATION

OSHA Regulatory Status

This product is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

EMERGENCY OVERVIEW

Appearance dark green

Physical state liquid

Odor None

Precautionary Statements - Prevention

Keep out of the reach of children.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash before reuse.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

IF SWALLOWED:, Drink 1 or 2 glasses of water. Call a physician immediately.

Storage:

Store in a well-ventilated place. Keep cool.

| 3. COMPOSITION/INFORMATION ON INGREDIENTS* | | | |
|--|-----------|----------|--|
| Chemical name | CAS No. | Weight-% | |
| Bromocresol purple | 115-40-2 | <0.01 | |
| Polyacrylamides | 9003-05-8 | <0.01 | |
| Cresol red | 1733-12-6 | < 0.01 | |

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Revision Date Feb-12-2016

| Bromcresol green | 76-60-8 | <0.01 |
|------------------|-----------|---------|
| Water | 7732-18-5 | to 100% |

4. FIRST AID MEASURES

| First Aid Measures | |
|------------------------------------|--|
| General advice | Do not get in eyes, on skin, or on clothing. |
| Eye contact | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| Skin contact | Wash skin with soap and water. |
| Inhalation | Not expected to require first aid measures. |
| Ingestion | Drink 1 or 2 glasses of water. |
| Self-protection of the first aider | Use personal protective equipment. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. |
| Notes to Physician | Treat symptomatically. |

5. FIREFIGHTING MEASURES

a alta UDA

<u>Suitable extinguishing media</u> Water spray, dry chemical, carbon dioxide (CO₂), or foam.

Protective equipment and precautions for firefighters As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

| | 6. ACCIDENTAL RELEASE MEASURES | |
|----------------------------------|---|--|
| Personal precautions, protectiv | e equipment and emergency procedures | |
| Personal precautions | See section 8. | |
| Environmental precautions | See Section 12 for additional Ecological Information. | |
| Methods and material for conta | inment and cleaning up | |
| Methods for containment | Soak up with inert absorbent material, containerize, and hold for disposal. Dispose according to federal, state, and local regulations. | |
| Methods for cleaning up | After cleaning, flush away traces with water. If local regulations permit, rinse to drain with excess water. | |
| | 7. HANDLING AND STORAGE | |
| Precautions for safe handling | | |
| Handling | Handle in accordance with good industrial hygiene and safety practice. Prevent contact with skin, eyes, and clothing. Do not taste or swallow. Do not eat, drink, or smoke when using this product. | |
| Conditions for safe storage, inc | luding any incompatibilities | |
| Storage: | Keep tightly closed in a dry and cool place. Keep out of the reach of children. | |

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Incompatible Products

None known.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

| Chemical name | ACGIH TLV | OSHA PEL | NIOSH IDLH |
|--------------------------------|-----------|----------|-----------------|
| Bromocresol purple 115-40-2 | ** | *- | Not Established |
| Polyacrylamides 9003-05-8 | * | *- | Not Established |
| Cresol red 1733-12-6 | ** | *- | Not Established |
| Bromcresol green 76-60-8 | · · | *- | Not Established |
| Water 7732-18-5 | * | | Not Established |

Appropriate engineering controls

Engineering Measures

Showers Eyewash stations Ventilation systems.

Individual protection measures, such as personal protective equipment

| Eye/Face Protection | Wear safety glasses with side shields (or goggles). | |
|--------------------------|---|--|
| Skin and body protection | Protective gloves. | |
| Respiratory protection | None required under normal usage. | |
| Hygiene Measures | Do not eat, drink or smoke when using this product. | |

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

| Physical state | liquid | | | |
|--------------------------------|--------------------------|---------------|------|--|
| Appearance | dark green | Odor | None | |
| Property | Values | Remarks • Met | hod | |
| рН | 7 | | | |
| Melting point / freezing point | No information available | | | |
| Boiling point / hoiling range | ca 100 °C / 212 °F | | | |
| Flash point | Not Applicable | | | |
| Evaporation rate | | | | |
| Flammability (solid, gas) | No information available | | | |
| Flammability Limit in Air | | | | |
| Upper flammability limit: | No information available | | | |
| Lower flammability limit: | No information available | | | |
| Vapor pressure | No information available | | | |
| Vapor density | No information available | | | |
| Specific gravity | No information available | | | |
| Water solubility | No information available | | | |
| Solubility in other solvents | No information available | | | |
| Partition coefficient | No information available | | | |
| Autoignition temperature | No information available | | | |
| Decomposition tomperature | No information available | | | |
| Kinematic viscos ty | No information available | | | |
| Dynamic viscosity | No information available | | | |
| Explosive producties | No information available | | | |

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Issuing Date Nov-29-2012

Oxidizing properties

Other Information

Softening point Molecular weight VOC Content (%) Density Bulk density

10. STABILITY AND REACTIVITY

| Stability Hazardous polymerization | Stable under normal conditions of use and storage. Hazardous polymerization does not occur. |
|---------------------------------------|--|
| Conditions to avoid | Extremes of temperature and direct sunlight. |
| Incompatible materials | None known. |

No information available

No information available No information available

No information available

No information available

No information available

Hazardous decomposition products None under normal use.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Component identification

| Chemical name | ATEmix (oral) | ATEmix (dermal) | Inhalation LC50 |
|--------------------------------|------------------|-----------------|-----------------|
| Bromocresol nurple 115-40-2 | Not Established | Not Established | Not Established |
| Polyacrylamides 9003-05-8 | > 1 g/kg (Rat) | Not Established | Not Established |
| Cresol red 1733-12-6 | Not Established | Not Established | Not Established |
| Bromcresal green 76-60-8 | Not Established | Not Established | Not Established |
| Water 7732-18-5 | > 90 mL/kg (Rat) | Not Established | Not Established |

Information on toxicological effects

| Chemical name | ACGIH | IARC | NTP | OSHA |
|--------------------------------|-----------------|-----------------|-----------------|-----------------|
| Bromocresol purple 115-40-2 | Not Established | Not Established | Not Established | Not Established |
| Polyacrylamides 9003-05-8 | Not Established | Not Established | Not Established | Not Established |
| Cresol red 1733-12-6 | Not Established | Not Established | Not Established | Not Established |
| Bromcresol gmen 76-60-8 | Not Established | Not Established | Not Established | Not Established |
| Water 7732-18-5 | Not Established | Not Established | Not Established | Not Established |

12. ECOLOGICAL INFORMATION

Ecotoxicity

| fical name | Toxicity to Algae | Toxicity to Fish | Daphnia Magna (Water Flea) |
|-------------------------|-------------------|------------------|----------------------------|
| Fermior isol purple | Not Established | Not Established | Not Established |
| Fordyaccylamides | Not Established | Not Established | Not Established |
| Grosol red 1733-12-6 | Not Established | Not Established | Not Established |
| Dromcresol green | Not Established | Not Established | Not Established |

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5070 *- WIDE RANGE SOIL INDICATOR

Issuing Date Nov-29-2012

| 76-60-8 | | | |
|-----------|-----------------|-----------------|-----------------|
| Water | Not Established | Not Established | Not Established |
| 7732-18-5 | | | |

Persistence and degradability No information available.

Bioaccumulation/Accumulation

No information available.

| Chemical name | Log Pow |
|--------------------------------|-----------------|
| Bromocresol purple 115-40-2 | Not Established |
| Polyacrylamides 9003-05-8 | Not Established |
| Cresol red 1733-12-6 | Not Established |
| Bromcresol green 76-60-8 | Not Established |
| Water 7732-18-5 | Not Established |

13. DISPOSAL CONSIDERATIONS

Disposal Mothods

Dispose of waste product or used containers according to local regulations. This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

*_

Contaminated packaging

Polyacrylamides 9003-05-8

Do not reuse empty containers.

| Chemical name | RCRA | RCRA - Basis for Listing | RCRA - D Series Wastes | RCRA - U Series Wastes |
|--------------------------------|-----------------|--------------------------|-------------------------------|-------------------------------|
| Bromocresol numble 115-40-2 | Not Established | | Not Established | Not Established |
| Polyach/an ides 9003-05-3 | Not Established | | Not Established | Not Established |
| Gro 17:3-12-6 | Not Established | | Not Established | Not Established |
| Bromorasol arcen 70-60-8 | Not Established | - | Not Established | Not Established |
| Water 7732-18-5 | Not Established | - | Not Established | Not Established |

| Chemical name | RCRA - Halogenated Organic Compounds | RCRA - P Series Wastes | RCRA - F Series Wastes | RCRA - K Series Wastes |
|--------------------------------|---|------------------------|------------------------|------------------------|
| Bromocresol purale 115-40-2 | Not Established | Not Established | Not Established | Not Established |
| Polyacrylamidea 9003-75-2 | Not Established | Not Established | Not Established | Not Established |
| Crossie 17: | Not Established | Not Established | Not Established | Not Established |
| Bromer site ann 76 s | Not Established | Not Established | Not Established | Not Established |
| 77 1-10 5 | Not Established | Not Established | Not Established | Not Established |
| | Chemical name | | California Hazardous W | aste Status |
| В | romocresol purple 115-40-2 | | *- | |

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5070 *- WIDE RANGE SOIL INDICATOR

Issuing Date Nov-29-2012

| Cresol red 1733-12-6 Bromcresol green 76-60-8 Water 7732-18-5 | | |
|--|--------------------|---------|
| | | *. |
| | | • |
| | 14. TRANSPORT INFO | RMATION |
| DOT | Not regulated | |
| IATA | Not regulated | |
| IMDG/IMO | Not regulated | |
| | | |

15. REGULATORY INFORMATION

| International Inventories | |
|---------------------------|-----------------|
| TSCA | Complies |
| DSL/NDSL | Complies |
| EINECS/ELINCS | Does not comply |
| ENCS | Does not comply |
| IECSC | Complies |
| KECL | Does not comply |
| PICCS | Complies |
| AICS | Complies |
| | |

Legend: TSCA - United States Toxic Substances Control Act Section 8(b) Inventory DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List EINECS/ELINCS - Finance Inventory of Existing Chemical Substances/European List of Notified Chemical Substances ENCS - Japan Existing and New Chemical Substances EICSC - China Inventory of Existing Chemical Substances KECL - Korean Existing and Evaluated Chemical Substances PICCS - Philippines Inventory of Chemicals and Chemical Substances AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

| Chemical name | SARA 313 - Threshold Values % |
|--------------------------------|-------------------------------|
| Bromocresol purple 115-40-2 | Not Established |
| Polyacrylamides 9003-05-8 | Not Established |
| Cresol red 1733-12-6 | Not Established |
| Bromcresol green 76-60-8 | Not Established |
| Water 7732-18-5 | Not Established |
| ARA 311/312 Hazard Categories | |
| Acute health hazard | No |
| Chronic Health Hazard | No |

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| Fire hazard | |
|------------------------|--------------|
| Sudden release of pres | ssure hazard |
| Reactive Hazard | |

No No

No

<u>CWA (Clean Water Act)</u> This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

| Chemical name | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants | CWA - Hazardous Substances |
|--------------------------------|--------------------------------|------------------------|---------------------------|-------------------------------|
| Bromocresol purple 115-4/-2 | Not Established | Not Established | Not Established | Not Established |
| Polyacrylamides 9003-05-8 | Not Established | Not Established | Not Established | Not Established |
| Cresol red 1733-12-6 | Not Established | Not Established | Not Established | Not Established |
| Bromeresol green 76-60 9 | Not Established | Not Established | Not Established | Not Established |
| Water 7732-18-5 | Not Established | Not Established | Not Established | Not Established |

CERCLA This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

| Chomi-al nome | Hazardous Substances RQs | CERCLA/SARA RQ | RQ |
|-------------------------|--------------------------|-----------------|----|
| Brownord is in inple | *- | Not Established | - |
| Polyac | *- | Not Established | - |
| Gresol rod 1733-12-6 | *- | Not Established | - |
| Bromers of green | *- | Not Established | |
| Vinter 773:-19-5 | * | Not Established | |

US State Regulations

This product does not contain any Proposition 65 chemicals.

| Chemical name | California Proposition 65 | |
|--------------------------------|---------------------------|--|
| Bromocresol purple 115-40-2 | Not Established | |
| Polyacrylamides 9003-05-8 | Not Established | |
| Cresol red 1733-12-6 | Not Established | |
| Bromcresol green 76-60-8 | Not Established | |
| Water 7732-18-5 | Not Established | |

U.S. State Right Know Regulations

| to the name | New Jersey | Massachusetts | Pennsylvania |
|--|-----------------|-----------------|-----------------|
| n role | Not Established | Not Established | Not Established |
| Private des | Not Established | Not Established | Not Established |
| There and the second se | Not Established | Not Established | Not Established |
| Pro: | Not Established | Not Established | Not Established |
| 772-10-5 | Not Established | Not Established | x |

CPSC (Consumer Product Safety Commission) - Specially Regulated Substances

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Issuing Date Nov-29-2012

| 16. OTHER INFORMATION | | | | |
|---|--------------------------------|----------------|---------------|-------------------------------------|
| G D | Health hazard 0 | Flammability 0 | Instability 0 | Physical and Chemica Hazards N/A |
| Prepared by ssuing Date Revision Date Disclaimer | Regulate Nov-29- Feb-12- | | | |

The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of Safety Data Sheet

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Safety Data Sheet

Revision Number 0

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

| Serious eye damage/eye irrita DANGER Hazard statements Causes serious eye damage. | EMERGENCY OVERVIEW | |
|--|---|------------------------------------|
| | EMERGENCY OVERVIEW | |
| Serious eye damuge/eye irrita | | outogory i |
| | tion | Category 1 |
| | 2. HAZARDS IDENTIFICATION | |
| Emergency telephone numb 24 Hour Emergency Number (collect) 813-248-0585 | P.O. Box 329 Chestertown, MD 21620 USA T 410-778-3100 F 410-778-9748 | ide North American Continent (Call |
| Details of the supplier of the | e safety data sheet Manufacturer Address LaMotte Company, Inc. 802 Washington Avenue | |
| Recommended use of the cl Recommended Use | nemical and restrictions on use Use as a laboratory reagent. Industrial (not for food o | r food contact use). |
| Product Code(s) UN-No | 5146 2837 | |
| Other means of identification | | |
| | | |

Wear protective gloves/protective clothing/eye protection/face protection.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

IF SWALLOWED, Drink 1 or 2 glasses of water, Call a physician immediately

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Other Hazards

Harmful to aquatic life with long lasting effects

3. COMPOSITION/INFORMATION ON INGREDIENTS

| Chemical name | CAS No | Weight-% |
|--------------------------------------|------------|----------|
| Cresol red | 1733-12-6 | <0.1 |
| Ammonium sulfate | 7783-20-2 | 8 |
| Sodium hydrogen sulfate, monohydrate | 10034-88-5 | 26 |
| Water | 7732-18-5 | to 100% |

| 4. FIRST AID MEASURES |
|--|
| |
| Show this safety data sheet to the doctor in attendance. Do not get in eyes, on skin, or on clothing. Do not breathe dust/fume/gas/mist/vapors/spray. |
| IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately. |
| Wash off immediately with soap and plenty of water for at least 15 minutes. Take off contaminated clothing and wash before reuse. If symptoms persist, call a physician. |
| IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. In symptoms persist, call a physician. |
| Do NOT induce vomiting. Drink plenty of water. Call a physician immediately. Never give anything by mouth to an unconscious person. |
| Use personal protection recommended in Section 8. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. |
| |

5. FIRE-FIGHTING MEASURES

<u>Suitable extinguishing media</u> Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Protective equipment and precautions for firefighters As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures Personal precautions Use personal protection recommended in Section 8. Avoid contact with eyes, skin and clothing. Environmental precautions See Section 12 for additional Ecological Information. Methods and material for containment and cleaning up Methods for containment Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local /

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| national regulations (see Section | 13). | | | |
|--|--|---|--|--|
| Containerize spill material and hold for later disposal. If local regulations permit, dissolve with large volume of water, neutralize with alkaline material (sodium bicarbonate), then rinse to drain with excess water. Clean contaminated surface thoroughly. After cleaning, flush away traces with water. | | | | |
| 7. HANDLING AND | STORAGE | | | |
| | | | | |
| | | s or clothing. Do not eat, drink o | | |
| ding any incompatibilities | | | | |
| Keep container tightly closed in children. Keep away from heat. | a dry and well-ventilated | place. Keep out of the reach of | | |
| Strong oxidizing agents. Acids. | Strong oxidizing agents. Acids. | | | |
| XPOSURE CONTROLS/PER | SONAL PROTECTI | ON | | |
| ACGIH TLV | OSHA PEL | NIOSH IDLH | | |
| - | | Not Established | | |
| | | Not Established | | |
| te - | - | Not Established | | |
| - | - | Not Established | | |
| | ··· . | | | |
| Showers Eyewash stations Ventilation systems. such as personal protective equip | ment | | | |
| Wear safety glasses with side s | hields (or goggies). | | | |
| Gloves & Lab Coat. Impervious | clothing. Rubber gloves. | Nitrile rubber. | | |
| Do not eat, drink or smoke when | n using this product. | | | |
| 9. PHYSICAL AND CHEMIC | CAL PROPERTIES | | | |
| d chemical properties | | | | |
| liquid Clear pink | Odor | Odorless | | |
| Values_ | Remarks . Methe | od | | |
| <1 | No information av | | | |
| | Containerize spill material and h with large volume of water, neutrinise to drain with excess water. flush away traces with water. 7. HANDLING AND Ensure adequate ventilation. Avismoke when using this product. Iding any incompatibilities Keep container tightly closed in children. Keep away from heat. Strong oxidizing agents. Acids. EXPOSURE CONTROLS/PER ACGIHTLV ACGIHTLV ACGIHTLV Showers Eyewash stations Ventilation systems. Such as personal protective equip Wear safety glasses with side sl Gloves & Lab Coat. Impervious Do not eat, drink or smoke when 9. PHYSICAL AND CHEMIC d chemical properties liquid Clear pink | Containerize spill material and hold for later disposal. If lowith large volume of water, neutralize with alkaline material flush away traces with water. 7. HANDLING AND STORAGE Ensure adequate ventilation. Avoid contact with skin, eye smoke when using this product. See section 8. Ming any incompatibilities Keep container tightly closed in a dry and well-ventilated children. Keep away from heat. Strong oxidizing agents. Acids. XPOSURE CONTROLS/PERSONAL PROTECTI ACGIH TLV OSHA PEL Image: a spectral and section s | | |

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Upper flammability limit: Lower flammability limit: Vapor pressure Vapor density Specific gravity Water solubility Solubility in other solvents Partition coefficient Autoignition temperature Decomposition temperature Kinematic viscosity Dynamic viscosity Explosive properties Oxidizing properties

Other Information

Softening point Molecular weight VOC Content ('') Density Bulk density No information available No information available

No information available

No information available No information available No information available No information available No information available

10. STABILITY AND REACTIVITY

Stability Hazardeus polymorization Stable under recommended storage conditions. Hazardous polymerization does not occur.

 Conditions to avoid
 Excessive heat.

 Incompatible materials
 Strong oxidizing agents. Acids.

 Hazarda is decomposition products
 Sulfur oxides (SOx). Sodium oxides. Ammonia.

6850

11. TOXICOLOGICAL INFORMATION

Information on Flory routes of exposure

| Chemical Lamo | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|--|--------------------|-----------------|-----------------|
| Cresol rei 1733-12-0 | Not Established | Not Established | Not Established |
| Ammonion: sulfate 7783-2/ | = 2000 mg/kg (Rat) | Not Established | Not Established |
| Sodium he ogen selfnte, monohyll te 10034- | = 2490 mg/kg (Rat) | Not Established | Not Established |
| Water 7732-1 | > 90 mL/kg (Rat) | Not Established | Not Established |

Information on t dicological effects

| Chemic | ame | ACGIH | IARC | NTP | OSHA |
|--------------------|----------|-------|-----------------|-----------------|------|
| Cresol m 1733-1 | | - | Not Established | Not Established | - |
| Ammonii 7783-20 | sullain | * | Not Established | Not Established | |
| nonohy 10034 | n l'ato, | - | Not Established | Not Established | |
| Nater 7732-1 | | | Not Established | Not Established | |

ATI Y (11-11

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12. ECOLOGICAL INFORMATION

Ecotoxicity_

| Chemical name | Toxicity to Algae | Toxicity to Fish | Daphnia Magna (Water Flea) |
|---------------------------------------|-------------------|--|--------------------------------------|
| Oresol red 1733-12-6 | Not Established | Not Established | Not Established |
| Ammonium sulfate ?7#3-20-2 | Not Established | 123 - 128: 96 h Poecilia reticulata mg/L LC50 semi-static 32.2 - 41.9: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 460 - 1000: 96 h Leuciscus idus mg/L LC50 static 5.2 - 8.2: 96 h Oncorhynchus mykiss mg/L LC50 static 126: 96 h Poecilia reticulata mg/L LC50 18: 96 h Cyprinus carpio mg/L LC50 250: 96 h Brachydanio rerio mg/L LC50 420: 96 h Brachydanio rerio mg/L LC50 semi-static 480: 96 h Brachydanio rerio mg/L LC50 flow-through 100: 96 h | |
| Sodium hydrogion and ate, monohydrate | Not Established | Not Established | 190: 48 h Daphnia magna mg/L EC50 |
| 14a'er 17-5 18-5 | Not Established | Not Established | Not Established |

Persistence and degradability

No information available.

Bioaccumulation (Accumulation No information available.

| Chemical name | Log Pow |
|-------------------------------|-----------------|
| Cresol red 1733-12-6 | Not Established |
| Ammonium sulfate 7783-20-2 | -5.1 |
| 10034-88-5 | Not Established |
| Water 7732-18-5 | Not Established |

13. DISPOSAL CONSIDERATIONS

Disposal Moll offe

Dispose of contents/containers in accordance with local regulations. This material, as supplied, is not a hazardous waste according to state and federal regulations (40 CFR 261). When in compliance with local regulations, neutralize reagent to pH 7 with dilute base (NaOH/soda ash/slaked lime), then rinse to drain with excess water.

Contaminated packaging

Dispose of waste product or used containers according to local regulations.

| Chenic III IP | RCRA | RCRA - Basis for Listing | RCRA - D Series Wastes | RCRA - U Series Wastes |
|--|-----------------|--------------------------|------------------------|-------------------------------|
| Cror on 173 - F | Not Established | | Not Established | Not Established |
| Ammonic 1.40 7783 2000 | Not Established | - | Not Established | Not Established |
| Sodium Fide Conte, magaineteri 1/000 | Not Established | | Not Established | Not Established |
| W 773 | Not Established | - | Not Established | Not Established |

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5146 Nitrato Reagent #1

Revision Date May-27-2015

| Chemical sauce | RCRA - Halogenated Organic Compounds | RCRA - P Series Wastes | RCRA - F Series Wastes | RCRA - K Series Wastes |
|--|---|------------------------|------------------------|------------------------|
| Gres d 1737 1 40 | Not Established | Not Established | Not Established | Not Established |
| Ammoni 778 | Not Established | Not Established | Not Established | Not Established |
| Sodium hydronia ulfate, monohistrate 1003 ma-5 | Not Established | Not Established | Not Established | Not Established |
| Wate 7732 19-5 | Not Established | Not Established | Not Established | Not Established |

| Chemical name | California Hazardous Waste Status |
|---|-----------------------------------|
| Cresol red 1733-12-6 | |
| Ammonium sulfate 7783-20-2 | - |
| hydrogen sulfate, monohydrate 10034-88-5 | |
| Water 7732-18-5 | - |

14. TRANSPORT INFORMATION

DOT

| Proper st aning name | BISULFATE, AQUEOUS SOLUTION |
|----------------------|-----------------------------|
| UN Ma | 2837 |
| Hazard C se | 8 |
| Packing Tre | 11 |

ATA

I

| Proper stinging name | BISULFATE, AQUEOUS SOLUTION |
|----------------------|-----------------------------|
| UN-*10 | 2837 |
| Hazard Clee | 8 |
| Packing | 11 |
| IMDG/IMO | |
| Proning name | BISULFATE, AQUEOUS SOLUTION |
| UN | 2837 |
| Hazart | 8 |
| Pactin | 11 |

15. REGULATORY INFORMATION

| Internation In | ories |
|----------------|-------|
| TSCA | |
| DSL/NDSL | |
| EINECS/FUNCS | |
| ENCS | |
| IECSC | |
| KECL | |
| PICCS | |
| AICS | |

Complies Does not comply Does not comply Does not comply Complies Does not comply Complies Complies

Legend: TSCA - Under Control Act Section 8(b) Inventory DSL/NDSL - Conversion Domestic Substances List/Non-Domestic Substances List EINECS/E: The of Exercision Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

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ENCS - Janan L. Isting and New Chemical Substances IECSC - Criminal entry of Existing Chemical Substances KECL - Korgan Existing and Evaluated Chemical Substances PICCS - Philippings Inventory of Chemicals and Chemical Substances AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

| Chemical name | SARA 313 - Threshold Values % |
|----------------------------------|-------------------------------|
| Cresol red 1733-12-6 | Not Established |
| Ammonium sulfate 7783-20-2 | 1.0 |
| 10034-88-5 | Not Established |
| Water 7732-18-5 | Not Established |
| SARA 311/3 Mezard Categories | |
| Acute he th hazard | Yes |
| Chronic Inalia Hazard | Yes |
| Fire 1 7 1 | No |
| Sudd a change of pressure hazard | No |

No

Reaction Concept pressure hazard

CWA (Cloan Mat r Act)

| Chamina' an in | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants | CWA - Hazardous Substances |
|----------------|--------------------------------|------------------------|---------------------------|-------------------------------|
| 1 6 | Not Established | Not Established | Not Established | Not Established |
| Amm | Not Established | Not Established | Not Established | Not Established |
| Sodium | Not Established | Not Established | Not Established | Not Established |
| 7 | Not Established | Not Established | Not Established | Not Established |

CERCI A This mate Environme Reauthor

pertaining

6

Mied, does not contain any substances regulated as hazardous substances under the Comprehensive se Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and
 ARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level of this material

| | Not Established Not Established | |
|---|---------------------------------|-------------------|
| - | Not Established | - |
| | | |
| | Not Established | |
| - | Not Established | |
| | - | - Not Established |

ain any Proposition 65 chemicals

New Jersey

ow Progrations

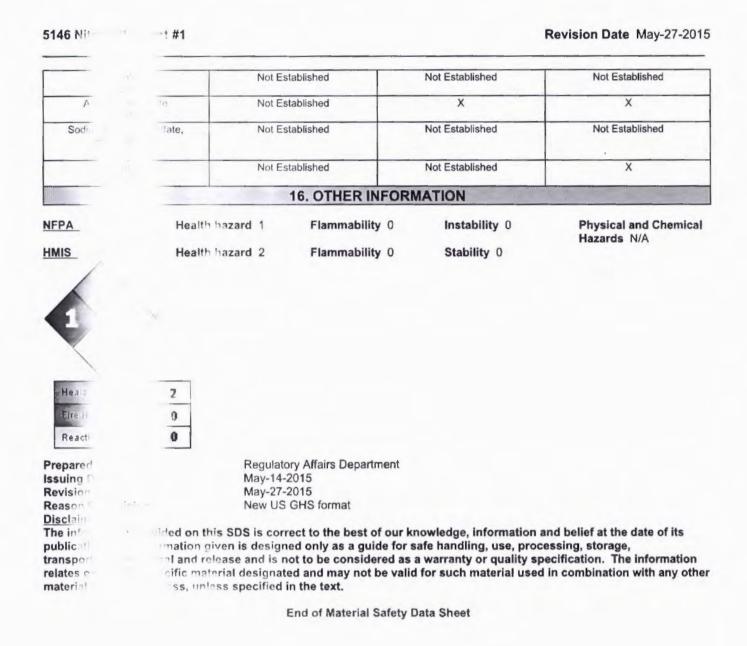
This prod

U.S. SIA

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Massachusetts

Pennsylvania



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Safety Data Sheet

Revision Number 0

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product id lifer Product name

NITRATE REAGENT #2

Other means of identification Product (od ... e) 5147

Recommonded area of the chemical and restrictions on use Use as a laboratory reagent. Industrial (not for food or food contact use). Recomm

Details of the unof the safety data sheet

Manufacturer Address LaMotte Company, Inc. 802 Washington Avenue P.O. Box 329 Chestertown, MD 21620 USA T 410-778-3100

Emergency telephone number 24 Hour Emergency (CHEM-TEL):USA, Canada, Puerto Rico 1-800-255-3924 Outside North American Continent (Call collect) 8 1 Jan 5

| | 2. HAZARDS IDENTIFICATIO | N |
|-------------------------------|--|--|
| Acute to | | Category 4 |
| Acute tox on (Dusts/Mist | ts) | Category 4 |
| Specific I toxicity (repeate | | Category 2 |
| | EMERGENCY OVERVIEW | |
| WARNING | Emeroenor overview | |
| | | |
| Hazard states | | |
| | led. May cause damage to organs through prol | onged or repeated exposure. |
| | | |
| A A | | |
| | | |
| K JL) | | |
| 45 | | |
| | | |
| | | |
| Appearance Off white | Physical state powder | Odor Odor |
| | Thysical state portaci | |
| Precaution Stroments - Prever | | |
| | skin thoroughly after handling. Do not eat, drink | |
| outdoor oblated area. | Do not breathe dust/fume/gas/mist/vapors/spra | ау. |
| Precaut - Respo | nse | |
| Get med tion if you fe | el unwell. | |
| Get me | | |
| | ater for several minutes. Remove contact lense | s, if present and easy to do. Continue rinsing |
| | ater for several minutes. Remove contact lense p and water. | s, if present and easy to do. Continue rinsing |
| IF IN EY ously with wa | | s, if present and easy to do. Continue rinsing |



Safety Data Sheet

Revision Number 0

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

| Product identifier | | |
|---|---|---|
| Product name | Potassium Reagent B Tablets | |
| Other means of identificatio | n | |
| Product Code(s) | 5161 | |
| UN-No | 1500 | |
| Recommended use of the c | hemical and restrictions on use | |
| Recommended Use | | dustrial (not for food or food contact use). Laboratory |
| Details of the supplier of the | e safety data sheet | |
| | Manufacturer Address | |
| | LaMotte Company, Inc. | |
| | 802 Washington Avenue | |
| | P.O. Box 329 | |
| | Chestertown, MD 21620 USA | |
| | T 410-778-3100 | |
| | F 410-778-9748 | |
| Emergency telephone number 24 Hour Emergency Number collect) 813-248-0585 | <u>per</u> (CHEM-TEL):USA, Canada, Puerto Rico | 1-800-255-3924 Outside North American Continent (Call |
| - | 2. HAZARDS IDENT | TIFICATION |
| Acute toxicity - Oral | | Category 3 |
| Carcinogenicity | | Category 1B |
| | EMERGENCY OV | ERVIEW |
| DANGER | | |
| Hazard statements | a cancer | |



Appearance Gold

Physical state Tablet

Odor None

Precautionary Statements - Prevention Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Wash face, hands and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product.

Precautionary Statements - Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash before reuse. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

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IF SWALLOWED: Immediately call a poison center or doctor/physician. Rinse mouth.

Precautionary Statements - Storage

Store locked up.

Precautionary Statements - Disposal Dispose of contents/container to an approved waste disposal plant.

Other Hazards

Very toxic to aquatic life with long lasting effects Very toxic to aquatic life

Unknown Acute Toxicity 29% of the mixture consists of ingredient(s) of unknown toxicity.

3. COMPOSITION/INFORMATION ON INGREDIENTS*

| Chemical name | CAS No | Weight-% |
|--------------------------------|------------|----------|
| Trisodium hexanitritocobaltate | 13600-98-1 | 29 |
| Sodium nitrite | 7632-00-0 | 60 |

| | 4. FIRST AID MEASURES |
|------------------------------------|---|
| First Aid Measures | |
| General advice | Show this safety data sheet to the doctor in attendance. Keep out of reach of children. |
| Eye contact | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Consult a physician. |
| Skin contact | Wash off with soap and plenty of water removing all contaminated clothes and shoes. Consult a physician. |
| Inhalation | Remove to fresh air. Consult a physician. |
| Ingestion | Induce vomiting as directed by medical personnel. Drink plenty of water. Call a physician of poison control center immediately. Rinse mouth. |
| Self-protection of the first aider | Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. |
| | 5. FIREFIGHTING MEASURES |

5. FIREFIGHTING MEASURES

Suitable extinguishing media Water spray. CO 2, alcohol-resistant foam or water spray.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid contact with eyes, skin and Personal precautions clothing.

Methods and material for containment and cleaning up

Page 2/8

Physical state Appearance

pH Melting point / freezing point Boiling point / boiling range Flash point

Property

Tablet Gold

Values

No information available No information available Not Applicable

Page 3/8

6

| Methods for containment | Sweep up in a manner that does not dispurse dust and shovel into suitable containers for disposal. | | |
|--|--|--|---|
| Methods for cleaning up | Keep in suitable and closed conta entering drains, sewers or surfact | ainers for disposal. Prevent e water due to high toxicity | t product and washings from to aquatic organisms. |
| | 7. HANDLING AND S | TORAGE | |
| Precautions for safe handling | | | |
| Handling | Avoid contact with eyes, skin and clothing. Avoid dust formation in confined areas. Avoid breathing dust. Do not taste or swallow. Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink, or smoke when using this product. | | |
| Conditions for safe storage, inclu | ding any incompatibilities | | |
| Storage | Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat and sources of ignition. Separate from incompatibles, combustibles, organic or other readily oxidizable materials. Keep out of the reach of children. | | |
| Incompatible Products | Strong reducing agents. Organic | material. Strong acids. Fin | ely powdered metals. |
| 8. E | XPOSURE CONTROLS/PER | SONAL PROTECTIO | N |
| Control parameters | | | |
| Chemical name | ACGIH TLV | OSHA PEL | NIOSH IDLH |
| Trisodium hexanitritocobaltate 13600-98-1 | TWA: 0.02 mg/m ³ Co | | Not Established |
| Sodium nitrite 7632-00-0 | | • | Not Established |
| Appropriate engineering controls | | | |
| Engineering Measures | Showers Eyewash stations Ventilation systems. | | |
| Individual protection measures, s | uch as personal protective equipr | nent | |
| Eye/Face Protection | Wear safety glasses with side sh | ields (or goggles). | |
| Skin and body protection | Gloves & Lab Coat. | | |
| Respiratory protection | If exposure limits are exceeded or respiratory protection should be | | NIOSH/MSHA approved |
| Hygiene Measures | Do not eat, drink or smoke when using this product. | | |
| | 9. PHYSICAL AND CHEMIC | AL PROPERTIES | |
| Information on basic physical and | d chemical monortics | | |

Odor

Remarks . Method

(1 tablet in 10mL of water)

None

5161 - Potassium Reagent B Tablets

| | 10. STABILITY AND REACTIVITY | da an inc |
|------------------------------|------------------------------|-----------|
| Bulk density | No information available | |
| Density | No information available | |
| VOC Content (%) | No information available | |
| Molecular weight | No information available | |
| Softening point | No information available | |
| Other Information | | |
| Oxidizing properties | No information available | |
| Explosive properties | No information available | |
| Dynamic viscosity | No information available | |
| Kinematic viscosity | No information available | |
| Decomposition temperature | No information available | |
| Autoignition temperature | No information available | |
| Partition coefficient | No information available | |
| Solubility in other solvents | No information available | |
| Water solubility | No information available | |
| Specific gravity | No information available | |
| Vapor density | No information available | |
| Vapor pressure | No information available | |
| Lower flammability limit: | No information available | |
| Upper flammability limit: | No information available | |
| Flammability Limit in Air | | |
| Flammability (solid, gas) | No information available | |

| Stable. |
|---|
| Substance is a strong oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition. Contact with oxidizable substances may cause extremely violent combustion. |
| Hazardous polymerization does not occur. |
| Moisture, Combustible materials, Excessive heat. |
| Strong reducing agents. Organic material. Strong acids. Finely powdered metals. |
| Nitrogen oxides (NOx). Sodium oxides. May produce the following when heated to decomposition:. Toxic metal fumes. |
| |

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Component identification

L

| Chemical name | ATEmix (oral) | ATEmix (dermal) | Inhalation LC50 |
|--|------------------|-----------------|----------------------|
| Trisodium hexanitritocobaltate 13600-98-1 | Not Established | Not Established | Not Established |
| Sodium nitrite 7632-00-0 | = 85 mg/kg (Rat) | Not Established | = 5.5 mg/L (Rat) 4 h |

Information on toxicological effects

| Chemical name | ACGIH | IARC | NTP | OSHA |
|---|-----------------|----------|-----------------|------|
| Trisodium hexanitritocobaltate 13600-98-1 | A3 | Group 2B | Not Established | x |
| Sodium nitrite 7632-00-0 | Not Established | Group 2A | Not Established | x |

A3 - Animal Carcinogen

Group 2B - Possibly Carcinogenic to Humans



X - Present

ATEmix (oral)

12. ECOLOGICAL INFORMATION

100.00

Ecotoxicity

| Chemical name | Toxicity to Algae | Toxicity to Fish | Daphnia Magna (Water Flea |
|--|-------------------|--|---------------------------|
| Trisodium hexanitritocobaltate 13600-98-1 | Not Established | Not Established | Not Established |
| Sodium nitrite 7632-00-0 | Not Established | 0.092 - 0.13: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 0.4 - 0.6: 96 h Oncorhynchus mykiss mg/L LC50 semi-static 0.65 - 1: 96 h Oncorhynchus mykiss mg/L LC50 static 0.19: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 2.3: 96 h Pimephales promelas mg/L LC50 flow-through 20: 96 h Pimephales promelas mg/L LC50 static | Not Established |

Persistence and degradability No information available.

Bioaccumulation/Accumulation No information available.

| Chemical name | Log Pow |
|--|-----------------|
| Trisodium hexanitritocobaltate 13600-98-1 | Not Established |
| Sodium nitrite 7632-00-0 | -3.7 |

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Dispose of waste product or used containers according to local regulations. Dispose of contents/containers in accordance with local regulations.

Contaminated packaging

Do not reuse empty containers.

| Chemical name | RCRA | RCRA - Basis for Listing | RCRA - D Series Wastes | RCRA - U Series Wastes |
|--|---|---|---|---|
| Trisodium hexanitritocobaltate 13600-98-1 | Not Established | | Not Established | Not Established |
| Sodium nitrite 7632-00-0 | Not Established | - | Not Established | Not Established |
| | | | | |
| | | | | |
| Chemical name | RCRA - Halogenated Organic Compounds | RCRA - P Series Wastes | RCRA - F Series Wastes | RCRA - K Series Wastes |
| Chemical name Trisodium hexanitritocobaltate 13600-98-1 | | RCRA - P Series Wastes Not Established | RCRA - F Series Wastes Not Established | RCRA - K Series Wastes Not Established |

| Chemical name | California Hazardous Waste Status | |
|--|-----------------------------------|--|
| Trisodium hexanitritocobaltate 13600-98-1 | Toxic | |
| Sodium nitrite | Toxic | |
| 7632-00-0 | Ignitable Reactive | |

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14. TRANSPORT INFORMATION

| DOT | |
|------------------------------|----------------|
| Proper shipping name | SODIUM NITRITE |
| UN-No | 1500 |
| Hazard Class | 5.1 |
| Subsidiary class | 6.1 |
| Packing group | III |
| 1474 | |
| IATA Proper shipping name | SODIUM NITRITE |
| UN-No | 1500 |
| Hazard Class | 5.1 |
| Subsidiary class | 6.1 |
| Packing group | III |
| IMDG/IMO | |
| Proper shipping name | SODIUM NITRITE |
| UN-No | 1500 |
| Hazard Class | 5.1 |
| Subsidiary class | 6.1 |
| Packing group | 111 |

15. REGULATORY INFORMATION

| International Inventories | |
|---------------------------|-----------------|
| TSCA | Does not comply |
| DSL/NDSL | Does not comply |
| EINECS/ELINCS | Complies |
| ENCS | Does not comply |
| IECSC | Complies |
| KECL | Complies |
| PICCS | Complies |
| AICS | Complies |
| | |

Legend: TSCA - United States Toxic Substances Control Act Section 8(b) Inventory DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances IECSC - China Inventory of Existing Chemical Substances KECL - Korean Existing and Evaluated Chemical Substances PICCS - Philippines Inventory of Chemicals and Chemical Substances AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

| Chemical name | SARA 313 - Threshold Values % |
|--|-------------------------------|
| Trisodium hexanitritocobaltate 13600-98-1 | 0.1 |
| Sodium nitrite 7632-00-0 | 1.0 |

| SARA 311/312 Hazard Categories | |
|-----------------------------------|-----|
| Acute health hazard | Yes |
| Chronic Health Hazard | Yes |
| Fire hazard | Yes |
| Sudden release of pressure hazard | No |
| Reactive Hazard | Yes |

CWA (Clean Water Act)

| Chemical name | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants | CWA - Hazardous Substances |
|---|--------------------------------|------------------------|---------------------------|-------------------------------|
| Trisodium hexanitritocobaltate 13600-98-1 | Not Established | Not Established | Not Established | Not Established |
| Sodium nitrite 7632-00-0 | 100 lb | Not Established | Not Established | x |

<u>CERCLA</u> This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

| Chemical name | Hazardous Substances RQs | CERCLA/SARA RQ | RQ |
|--|--------------------------|-----------------|---|
| Trisodium hexanitritocobaltate 13600-98-1 | | Not Established | |
| Sodium nitrite 7632-00-0 | 100 lb | Not Established | RQ 100 lb final RQ RQ 45.4 kg final RQ |

California Proposition 65

This product does not contain any Proposition 65 chemicals

| Not Established |
|-----------------|
| Not Established |
| |

U.S. State Right-to-Know Regulations

| Chemical name | New Jersey | Massachusetts | Pennsylvania |
|--|------------|-----------------|--------------|
| Trisodium hexanitritocobaltate 13600-98-1 | x | Not Established | × |
| Sodium nitrite 7632-00-0 | x | x | x |

CPSC (Consumer Product Safety Commission) - Specially Regulated Substances

16. OTHER INFORMATION

| teability O | | Instability 0 | Physical and Chemical Hazards OX |
|-------------|-------------|---------------|-------------------------------------|
| | | | |
| | | | |
| | | | |
| | itability 2 | tability 2 | tability 2 |

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| Health Hazard | 2 |
|---------------|---|
| Fine Macand | 0 |
| Reactivity | 2 |

Prepared by Issuing Date Reason for revision <u>Disclaimer</u> Regulatory Affairs Department Feb-14-2012 Update to Format

The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of Safety Data Sheet

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Safety Data Sheet

Revision Number 0

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

| Product identifier | |
|---------------------------------|---|
| Product name | Potassium Reagent B Tablets |
| | |
| Other means of identification | |
| Product Code(s) | 5161A |
| UN-No | 1500 |
| Recommended use of the c | hemical and restrictions on use |
| Recommended Use | Use as a laboratory reagent. Industrial (not for food or food contact use). Laboratory |
| | chemicals. |
| Details of the supplier of the | e safety data sheet |
| | Manufacturer Address |
| | LaMotte Company, Inc. |
| | 802 Washington Avenue |
| | P.O. Box 329 |
| | Chestertown, MD 21620 USA |
| | T 410-778-3100 |
| | F 410-778-9748 |
| Emergency telephone numb | ber |
| 24 Hour Emergency Number | (CHEM-TEL):USA, Canada, Puerto Rico 1-800-255-3924 Outside North American Continent (Call |

collect) 813-248-0585

| 2. HAZARDS IDENTIFICATION | | | |
|---------------------------|------------------|--|--|
| Acute toxicity - Oral | Category 3 | | |
| Carcinogenicity | Category 1B | | |
| EM | ERGENCY OVERVIEW | | |
| DANGER | | | |

| Hazard statements Toxic if swallowed. May cause cance | r. | |
|--|-----------------------|-----------|
| | | |
| Appearance Gold | Physical state Tablet | Odor None |

Precautionary Statements - Prevention Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Wash face, hands and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product.

Precautionary Statements - Response IF exposed or concerned: Get medical advice/attention.

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IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician, Rinse mouth

Precautionary Statements - Storage Store locked up.

Precautionary Statements - Disposal Dispose of contents/container to an approved waste disposal plant.

Other Hazards Very toxic to aquatic life with long lasting effects

Unknown Acute Toxicity 29% of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

| Chemical name | CAS No | Weight-% |
|------------------------------|------------|----------|
| isodium hexanitritocobaltate | 13600-98-1 | 29 |
| Sodium nitrite | 7632-00-0 | 60 |

| 4. FIRST AID MEASURES | | |
|------------------------------------|--|--|
| First Aid Measures | | |
| General advice | Show this safety data sheet to the doctor in attendance. Keep out of reach of children. | |
| Eye contact | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician. | |
| Skin contact | Wash off immediately with soap and plenty of water for at least 15 minutes. Take off contaminated clothing and wash before reuse. Consult a physician if necessary. | |
| Inhalation | Remove to fresh air. If symptoms persist, call a physician. | |
| Ingestion | Call a physician or poison control center immediately. Induce vomiting, but only if victim is fully conscious. Rinse mouth. Drink plenty of water. | |
| Self-protection of the first aider | Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. | |
| | | |

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

| Personal precautions | Use personal protection recommended in Section 8. Avoid contact with eyes, skin and clothing. Avoid dust formation. | |
|---------------------------|--|--|
| Environmental precautions | See Section 12 for additional Ecological Information | |

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Methods and material for containment and cleaning up

| Methods for containment | Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see Section 13). | | |
|-------------------------|---|--|--|
| Methods for cleaning up | Prevent product and washings from entering drains, sewers or surface water due to high toxicity to aquatic organisms. | | |
| | 7. HANDLING AND STORAGE | | |

Precautions for safe handling

Handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Avoid dust formation. Do not taste or swallow. Do not eat, drink or smoke when using this product.

Conditions for safe storage, including any incompatibilities

Storage

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from open flames, hot surfaces and sources of ignition. Keep out of the reach of children. Store away from incompatible materials.

Incompatible Products

Engineering Measures

Strong reducing agents. Organic material. Strong acids. Finely powdered metals.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

| Chemical name | ACGIH TLV | OSHA PEL | NIOSH IDLH |
|--|-----------------------------|----------|-----------------|
| Trisodium hexanitritocobaltate 13600-98-1 | TWA: 0.02 mg/m ³ | | Not Established |
| Sodium nitrite 7632-00-0 | • | - | Not Established |

Appropriate engineering controls

| Showers |
|----------------------|
| Eyewash stations |
| Ventilation systems. |

Individual protection measures, such as personal protective equipment

Eye/Face ProtectionWear safety glasses with side shields (or goggles).Skin and body protectionProtective gloves. Nitrile rubber. Gloves & Lab Coat.Respiratory protectionIf exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved
respiratory protection should be worn.Hygiene MeasuresDo not eat, drink or smoke when using this product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

| Physical state Appearance | Tablet Gold | Odor | None | |
|--|---|-------------------|-------------|--|
| Property | Values | Remarks • Met | hod | |
| pH Melting point / freezing point Boiling point / boiling range Flash point | 6 No information available No information available No information available | (1 tablet in 10ml | L of water) | |

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5161A Potassium Reagent B Tablets

| Evaporation rate | | | |
|------------------------------|---|--|--|
| Flammability (solid, gas) | No information available | | |
| Flammability Limit in Air | | | |
| Upper flammability limit: | No information available | | |
| Lower flammability limit: | No information available | | |
| Vapor pressure | No information available | | |
| Vapor density | No information available | | |
| Specific gravity | No information available | | |
| Water solubility | No information available | | |
| Solubility in other solvents | No information available | | |
| Partition coefficient | No information available | | |
| Autoignition temperature | No information available | | |
| Decomposition temperature | No information available | | |
| Kinematic viscosity | No information available | | |
| Dynamic viscosity | No information available | | |
| Explosive properties | No information available | | |
| Oxidizing properties | No information available | | |
| Other Information | | | |
| Softening point | No information available | | |
| Molecular weight | No information available | | |
| VOC Content (%) | No information available | | |
| Density | No information available | | |
| Bulk density | No information available | | |
| | 10. STABILITY AND REACTIVITY | | |
| | | | |
| Stability | Stable. | | |
| Hazardous Reactions | Substance is a strong oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition. Contact with oxidizable substances may cause extremely violent combustion. | | |
| Hazardous polymerization | Hazardous polymerization does not occur. | | |

Conditions to avoidMoisture. Combustible materials. Excessive heat.Incompatible materialsStrong reducing agents. Organic material. Strong acids. Finely powdered metals.Hazardous decomposition productsNitrogen oxides (NOx). Sodium oxides. May produce the following when heated to decomposition:. Toxic metal fumes.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

| Chemical name | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|--|------------------|-----------------|----------------------|
| Trisodium hexanitritocobaltate 13600-98-1 | Not Established | Not Established | Not Established |
| Sodium nitrite 7632-00-0 | = 85 mg/kg (Rat) | Not Established | = 5.5 mg/L (Rat) 4 h |

Information on toxicological effects

| Chemical name | ACGIH | IARC | NTP | OSHA |
|---|-------|----------|-----------------|------|
| Trisodium hexanitritocobaltate 13600-98-1 | A3 | Group 2B | Not Established | x |
| Sodium nitrite 7632-00-0 | | Group 2A | Not Established | X |

A3 - Animal Carcinogen

Group 2B - Possibly Carcinogenic to Humans

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X - Present

ATEmix (oral)

100 mg/kg

12. ECOLOGICAL INFORMATION

Ecotoxicity

| Chemical name | Toxicity to Algae | Toxicity to Fish | Daphnia Magna (Water Flea |
|--|-------------------|--|---------------------------|
| Trisodium hexanitritocobaltate 13600-98-1 | Not Established | Not Established | Not Established |
| Sodium nitrite 7632-00-0 | Not Established | 0.092 - 0.13: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 0.4 - 0.6: 96 h Oncorhynchus mykiss mg/L LC50 semi-static 0.65 - 1: 96 h Oncorhynchus mykiss mg/L LC50 static 0.19: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 2.3: 96 h Pimephales promelas mg/L LC50 flow-through 20: 96 h Pimephales promelas mg/L LC50 static | Not Established |

Persistence and degradability No information available.

Bioaccumulation/Accumulation No information available.

| Chemical name | Log Pow |
|--|-----------------|
| Trisodium hexanitritocobaltate 13600-98-1 | Not Established |
| Sodium nitrite 7632-00-0 | -3.7 |

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Dispose of waste product or used containers according to local regulations. Dispose of contents/containers in accordance with local regulations.

Contaminated packaging

Do not reuse empty containers.

| Chemical name | RCRA | RCRA - Basis for Listing | RCRA - D Series Wastes | RCRA - U Series Wastes |
|---|---|--------------------------|------------------------|-------------------------------|
| Trisodium hexanitritocobaltate 13600-98-1 | Not Established | - | Not Established | Not Established |
| Sodium nitrite 7632-00-0 | Not Established | • | Not Established | Not Established |
| Chemical name | RCRA - Halogenated Organic Compounds | RCRA - P Series Wastes | RCRA - F Series Wastes | RCRA - K Series Wastes |
| Trisodium hexanitritocobaltate 13600-98-1 | Not Established | Not Established | Not Established | Not Established |
| Sodium nitrite 7632-00-0 | Not Established | Not Established | Not Established | Not Established |
| | Chemical name | | California Hazardous W | aste Status |
| Trisodium hexanitritocobaltate 13600-98-1 | | | | |
| | Sodium nitrite 7632-00-0 | | - | |

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14. TRANSPORT INFORMATION

| DOT | |
|----------------------|----------------|
| Proper shipping name | SODIUM NITRITE |
| UN-No | 1500 |
| Hazard Class | 5.1 |
| Subsidiary class | 6.1 |
| Packing group | III |
| IATA | |
| Proper shipping name | SODIUM NITRITE |
| UN-No | 1500 |
| Hazard Class | 5.1 |
| Subsidiary class | 6.1 |
| Packing group | |
| IMDG/IMO | |
| Proper shipping name | SODIUM NITRITE |
| UN-No | 1500 |
| Hazard Class | 5.1 |
| Subsidiary class | 6.1 |
| Packing group | III |

15. REGULATORY INFORMATION

| International Inventories | |
|---------------------------|----------|
| TSCA | Complies |
| DSL/NDSL | Complies |
| EINECS/ELINCS | Complies |
| ENCS | Complies |
| IECSC | Complies |
| KECL | Complies |
| PICCS | Complies |
| AICS | Complies |

Legend: TSCA - United States Toxic Substances Control Act Section 8(b) Inventory DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances PICCS - Philippines Inventory of Chemicals and Chemical Substances AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313 Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

| Chemical name | SARA 313 - Threshold Values % |
|--|-------------------------------|
| Trisodium hexanitritocobaltate 13600-98-1 | 0.1 |
| Sodium nitrite 7632-00-0 | 1.0 |

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5161A Potassium Reagent B Tablets

| Revision Dat | e Apr-30-2015 |
|---------------------|---------------|
|---------------------|---------------|

| Acute health hazard | Yes |
|-----------------------------------|-----|
| Chronic Health Hazard | Yes |
| Fire hazard | Yes |
| Sudden release of pressure hazard | No |
| Reactive Hazard | Yes |

CWA (Clean Water Act)

| Chemical name | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants | CWA - Hazardous Substances |
|---|--------------------------------|------------------------|---------------------------|-------------------------------|
| Trisodium hexanitritocobaltate 13600-98-1 | Not Established | Not Established | Not Established | Not Established |
| Sodium nitrite 7632-00-0 | 100 lb | Not Established | Not Established | X |

CERCLA This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

| Chemical name | Hazardous Substances RQs | CERCLA/SARA RQ | RQ |
|--|--------------------------|-----------------|---|
| Trisodium hexanitritocobaltate 13600-98-1 | - | Not Established | - |
| Sodium nitrite 7632-00-0 | 100 lb | Not Established | RQ 100 lb final RQ RQ 45.4 kg final RQ |

US State Regulations

This product does not contain any Proposition 65 chemicals U.S. State Right-to-Know Regulations

| ealth hazard 2 | × × 16. OTHER INFOR | Not Established | x |
|----------------|--------------------------------|--|-------------------------------|
| alth hazard 2 | | | x |
| alth barard 2 | 16. OTHER INFOR | IL TION | |
| alth barard 2 | | MATION | |
| ealth hazard 2 | Flammability 0 | Instability 0 | Physical and Chemical Hazards |
| ealth hazard 2 | Flammability 0 | Stability 2 | Hazards UA |
| | | | |
| | | | |
|] | | | |
| | | | |
| | | | |
| | | | |
| | Apr-30-2 Apr-30-2 New US | Regulatory Affairs Department Apr-30-2015 Apr-30-2015 New US GHS format | Apr-30-2015 Apr-30-2015 |

publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other

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material or in any process, unless specified in the text.

End of Material Safety Data Sheet

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Safety Data Sheet

Revision Number 0

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

| Product identifier | |
|--------------------------------|--|
| Product name | Potassium Reagent C |
| Other means of identificatio | an |
| Product Code(s) | 5162 |
| UN-No | 1170 |
| Recommended use of the cl | hemical and restrictions on use |
| Recommended Use | Use as a laboratory reagent. Industrial (not for food or food contact use). Laboratory chemicals. |
| Details of the supplier of the | e safety data sheet |
| | Manufacturer Address |
| | LaMotte Company, Inc. |
| | 802 Washington Avenue |
| | P.O. Box 329 |
| | Chestertown, MD 21620 USA |
| | T 410-778-3100 |

Emergency telephone number 24 Hour Emergency Number (CHEM-TEL):USA, Canada, Puerto Rico 1-800-255-3924 Outside North American Continent (Call collect) 813-248-0585

F 410-778-9748

2. HAZARDS IDENTIFICATION

| Acute toxicity - Oral | Category 4 | |
|--|-------------|--|
| Serious eye damage/eye irritation | Category 2A | |
| Germ cell mutagenicity | Category 1B | |
| Carcinogenicity | Category 1A | |
| Reproductive Toxicity | Category 1A | |
| Specific target organ toxicity (single exposure) | Category 2 | |
| Specific target organ toxicity (repeated exposure) | Category 1 | |
| Physical hazards Flammable Liquids. | Category 2 | |

EMERGENCY OVERVIEW

DANGER

Hazard statements Harmful if swallowed. Causes serious eye irritation. May cause genetic defects. May cause cancer. May damage fertility or the unborn child. May cause damage to organs. Causes damage to organs through prolonged or repeated exposure. . Highly flammable liquid and vapor.



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5162 Potassium Reagent C

Appearance Clear yellow solution Physical state liquid Odor Alcohol

Precautionary Statements - Prevention Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Wash face, hands and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Wear eye/face protection. Do not breathe dust/fume/gas/mist/vapors/spray. Keep away from heat/sparks/open flames/hot surfaces. — No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge.

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell, Rinse mouth

In case of fire: Use CO2, dry chemical, or foam for extinction

Precautionary Statements - Storage Store locked up. Store in a well-ventilated place. Keep cool.

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant.

Other Hazards

Toxic to aquatic life with long lasting effects

3. COMPOSITION/INFORMATION ON INGREDIENTS

| Chemical name | CAS No | Weight-% |
|----------------|---------|----------|
| Methyl alcohol | 67-56-1 | 4 |
| Ethyl alcohol | 64-17-5 | 80 |

4. FIRST AID MEASURES

| First Aid Measures | |
|------------------------------------|---|
| General advice | Do not get in eyes, on skin, or on clothing. Consult a physician. |
| Eye contact | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician immediately. |
| Skin contact | Wash off immediately with soap and plenty of water for at least 15 minutes. Take off contaminated clothing and wash before reuse. Consult a physician if necessary. |
| Inhalation | IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. If symptoms persist, call a physician. |
| Ingestion | Drink 1 or 2 glasses of water. Do not induce vomiting without medical advice. Call a physician immediately. |
| Self-protection of the first aider | Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. For personal protection see Section 8. |

5. FIRE-FIGHTING MEASURES

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Suitable extinguishing media Water spray, dry chemical, carbon dioxide (CO2), or foam.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

| | 6. ACCIDENTAL RELEASE MEASURES | | | |
|---------------------------------|---|--|--|--|
| Personal precautions, protectiv | ve equipment and emergency procedures | | | |
| Personal precautions | See section 8. Ensure adequate ventilation. Remove all sources of ignition. | | | |
| Environmental precautions | See Section 12 for additional Ecological Information. | | | |
| Methods and material for conta | inment and cleaning up | | | |
| Methods for containment | Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container. Dispose according to federal, state, and local regulations. | | | |
| Methods for cleaning up | After cleaning, flush away traces with water. | | | |
| | 7. HANDLING AND STORAGE | | | |
| Precautions for safe handling | | | | |
| Handling | Use only in area provided with appropriate exhaust ventilation. Handle in accordance with good industrial hygiene and safety practice. Prevent contact with skin, eyes, and clothing. Do not taste or swallow. Do not eat, drink, or smoke when using this product. | | | |
| Conditions for safe storage, In | cluding any incompatibilities | | | |
| Storage | Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from hea and sources of ignition. Do not store near combustible materials. Keep out of the reach of children. | | | |
| Incompatible Products | Strong oxidizing agents. Strong acids. | | | |
| | EXPOSURE CONTROLS/PERSONAL PROTECTION | | | |

ACGIH TLV NIOSH IDLH OSHA PEL Chemical name 250 ppm STEL TWA: 200 ppm TWA: 200 ppm TWA: 260 mg/m³ IDLH: 6000 ppm TWA: 200 ppm TWA: 260 mg/m³ Methyl alcohol 67-56-1 STEL: 250 ppm STEL: 325 mg/m³ TWA: 1000 ppm TWA: 1900 mg/m³ Ethyl alcohol 64-17-5 IDLH: 3300 ppm TWA: 1000 ppm TWA: 1900 mg/m³ 1000 ppm STEL

Appropriate engineering controls

Engineering Measures

Showers Eyewash stations Ventilation systems.

Individual protection measures, such as personal protective equipment

| Eye/Face Protection | Wear safety glasses with side shields (or goggles). |
|--------------------------|---|
| Skin and body protection | Wear protective gloves/clothing. Nitrile rubber. Gloves & Lab Coat. |

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Revision Date Jun-08-2015

Respiratory protection

Hygiene Measures

Use only with adequate ventilation.

Do not eat, drink or smoke when using this product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

| Physical state | liquid | | |
|--------------------------------|--|-----------------|----------------------------|
| Appearance | Clear yellow solution | Odor | Alcohol |
| Property | Values | Remarks • Me | thod |
| pH | | Not Applicable | |
| Melting point / freezing point | No information available | | |
| Boiling point / boiling range | 78.5 °C / 173.3 °F for SDA (3A) Ethyl Alcohol | | |
| Flash point | 16 °C / 60.8 °F | for SDA (3A) Ef | thyl Alcohol |
| Evaporation rate | | | |
| Flammability (solid, gas) | No information available | | |
| Flammability Limit in Air | | | |
| Upper flammability limit: | 19% | | |
| Lower flammability limit: | 3.3% | | |
| Vapor pressure | 48 | mmHg @ 20°C | for SDA (3A) Ethyl Alcohol |
| Vapor density | 1.6 | | for SDA (3A) Ethyl Alcohol |
| Specific gravity | No information available | 0 | |
| Water solubility | No information available | | |
| Solubility in other solvents | No information available | | |
| Partition coefficient | No information available | | |
| Autoignition temperature | No information available | | |
| Decomposition temperature | No information available | | |
| Kinematic viscosity | No information available | | |
| Dynamic viscosity | No information available | | |
| Explosive properties | No information available | | |
| Oxidizing properties | No information available | | |
| Other Information | | | |
| Softening point | No information available | | |
| Molecular weight | No information available | | |
| VOC Content (%) | No information available | | |
| Density | No information available | | |
| | No information available | | |
| Bulk density | | | |
| Bulk density | 10. STABILITY AND REA | CTIVITY | |
| Bulk density | 10. STABILITY AND REA | CTIVITY | |
| Bulk density Stability | 10. STABILITY AND REA Stable under recommended storage | | |
| | and the second | conditions. | |

Incompatible materials Strong oxidizing agents. Strong acids. Hazardous decomposition products Carbon oxides (COx).

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

| Chemical name | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|----------------|--------------------|------------------------|-------------------------------|
| Methyl alcohol | = 6200 mg/kg (Rat) | = 15800 mg/kg (Rabbit) | = 22500 ppm (Rat) 8 h = 64000 |

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5162 Potassium Reagent C

| 67-56-1 | | | ppm (Rat)4h |
|--------------------------|--------------------|-----------------|------------------------|
| Ethyl alcohol 64-17-5 | = 7060 mg/kg (Rat) | Not Established | = 124.7 mg/L (Rat) 4 h |

Information on toxicological effects

The table below indicates whether each agency has listed any ingredient as a carcinogen. Carcinogenicity

| Chemical name | ACGIH | IARC | NTP | OSHA |
|---------------------------|-----------------|-----------------|-----------------|-----------------|
| Methyl alcohol 67-56-1 | Not Established | Not Established | Not Established | Not Established |
| Ethyl alcohol 64-17-5 | A3 | Group 1 | Known | x |

Known - Known Carcinogen **Chronic toxicity**

Ethanol has been shown to be a reproductive toxin only when consumed as an alcoholic beverage. Prolonged skin contact may cause skin irritation and/or dermatitis.

| ATEmix (oral) | 1948 |
|-------------------------------|------------|
| ATEmix (dermal) | 7500 mg/kg |
| ATEmix (inhalation-dust/mist) | 12.5 mg/l |

12. ECOLOGICAL INFORMATION

| Chemical name | Toxicity to Algae | Toxicity to Fish | Daphnia Magna (Water Flea) |
|---------------------------|-------------------|--|---|
| Methyl alcohol 67-56-1 | Not Established | 13500 - 17600: 96 h Lepomis macrochirus mg/L LC50 flow-through 18 - 20: 96 h Oncorhynchus mykiss mL/L LC50 static 19500 - 20700: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 28200: 96 h Pimephales promelas mg/L LC50 flow-through 100: 96 h Pimephales promelas mg/L LC50 static | |
| Ethyl alcohol 64-17-5 | Not Established | 12.0 - 16.0: 96 h Oncorhynchus mykiss mL/L LC50 static 13400 - 15100: 96 h Pirnephales promelas mg/L LC50 flow-through 100: 96 h Pirnephales promelas mg/L LC50 static | 9268 - 14221: 48 h Daphnia magna mg/L LC50 10800: 24 h Daphnia magna mg/L EC50 2: 40 h Daphnia magna mg/L EC50 Static |

Persistence and degradability

<u>Persistence and degradability</u> Ethanol: When released into the soil, this material is expected to leach into groundwater. When released into the soil, this material is expected to quickly evaporate. When released into water, this material may evaporate to a moderate extent. When released into the air, this material is expected to be readily degraded by reaction with photochemically produced hydroxyl radicals. When released into the air, this material is expected to be readily removed from the atmosphere by dry and wet deposition. When released into the air, this material is expected to be readily removed from the atmosphere by dry and wet deposition. When released into the air, this material is expected to have a half-life between 1 and 10 days.

Bioaccumulation/Accumulation

No information available.

| Chemical name | Log Pow |
|---------------------------|---------|
| Methyl alcohol 67-56-1 | -0.77 |
| Ethyl alcohol 64-17-5 | -0.32 |

| 13. DISPOSAL CONSIDERATIONS | |
|-----------------------------|---|
| Disposal Methods | Dispose of waste product or used containers according to local regulations. |
| Contaminated packaging | Do not reuse empty containers. |

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| Chemical name | RCRA | RCRA - Basis for Listing | RCRA - D Series Wastes | RCRA - U Series Wastes |
|---------------------------|---|--|---|--|
| Methyl alcohol 67-56-1 | Not Established | Included in waste stream: F039 | Not Established | Ignitable waste |
| Ethyl alcohol 64-17-5 | Not Established | - | Not Established | Not Established |
| AL 1.1 | | | | |
| Chemical name | RCRA - Halogenated Organic Compounds | RCRA - P Series Wastes | RCRA - F Series Wastes | RCRA - K Series Wastes |
| Methyl alcohol 67-56-1 | | RCRA - P Series Wastes Not Established | RCRA - F Series Wastes Not Established | RCRA - K Series Wastes Not Established |

This product contains one or more substances that are listed with the State of California as a hazardous waste.

| Chemical name | California Hazardous Waste Status | |
|---------------------------|-----------------------------------|--|
| Methyl alcohol 67-56-1 | | |
| Ethyl alcohol 64-17-5 | | |

14. TRANSPORT INFORMATION

| Proper shipping name | ETHANOL SOLUTION (Ethyl Alcohol Solution |
|----------------------|--|
| UN-No | 1170 |
| Hazard Class | 3 |
| Packing group | 11 |

| Proper shipping name | ETHANOL SOLUTION (Ethyl Alcohol Solution) |
|----------------------|---|
| UN-No | 1170 |
| Hazard Class | 3 |
| Packing group | Ш |
| MDG/IMO | |
| Proper shipping name | ETHANOL SOLUTION (Ethyl Alcohol Solution) |
| UN-No | 1170 |
| Hazard Class | 3 |
| Packing group | 11 |

15. REGULATORY INFORMATION

International Inventories TSCA DSL/NDSL EINECS/ELINCS ENCS IECSC KECL PICCS AICS

Does not comply Complies Complies Does not comply Complies Complies Complies Complies

Legend: TSCA - United States Toxic Substances Control Act Section 8(b) Inventory DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

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EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

| Chemical name | SARA 313 - Threshold Values % |
|-----------------------------------|-------------------------------|
| Methyl alcohol 67-56-1 | 1.0 |
| Ethyl alcohol 64-17-5 | Not Established |
| SARA 311/312 Hazard Categories | |
| Acute health hazard | Yes |
| Chronic Health Hazard | Yes |
| Fire hazard | Yes |
| Sudden release of pressure hazard | No |
| Reactive Hazard | No |

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

| Chemical name | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants | CWA - Hazardous Substances |
|---------------------------|--------------------------------|------------------------|---------------------------|-------------------------------|
| Methyl alcohol 67-56-1 | Not Established | Not Established | Not Established | Not Established |
| Ethyl alcohol 64-17-5 | Not Established | Not Established | Not Established | Not Established |

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

| Chemical name | Hazardous Substances RQs | CERCLA/SARA RQ | RQ |
|---------------------------|--------------------------|-----------------|--|
| Methyl alcohol 67-56-1 | 5000 lb | Not Established | RQ 5000 lb final RQ RQ 2270 kg final RQ |
| Ethyl alcohol 64-17-5 | | Not Established | |

US State Regulations

California Proposition 65

WARNING! This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm

(Ethyl alcohol is only considered a Proposition 65 cancer and developmental hazard when it is ingested as an alcoholic beverage)

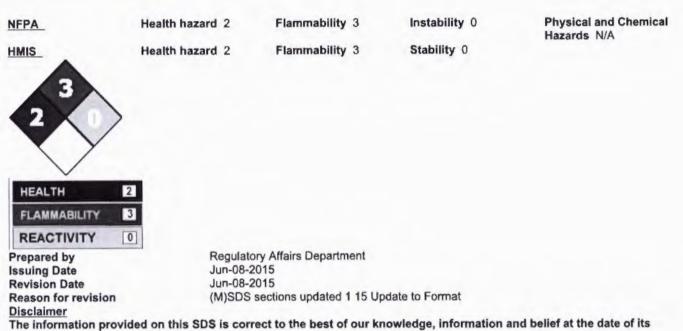
| Chemical name | California Proposition 65 |
|---------------------------|---------------------------|
| Methyl alcohol 67-56-1 | Developmental |
| Ethyl alcohol 64-17-5 | Carcinogen |

U.S. State Right-to-Know Regulations

| X |
|---|
| ~ |
| x |
| |

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5162 Potassium Reagent C



The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of Material Safety Data Sheet

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Safety Data Sheet

OSHA format **Revision Number** 0

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

| Product identifier | |
|--------------------------------|---|
| Product name | UNIVERSAL EXTRACTING SOLUTION |
| Other means of identificatio | |
| Product Code(s) | 5173 |
| Recommended use of the c | hemical and restrictions on use |
| Recommended Use | Use as a laboratory reagent. Laboratory chemicals. Industrial (not for food or food contact use). |
| Details of the supplier of the | e safety data sheet |
| | LaMotte Company, Inc. |
| | 802 Washington Avenue |
| | P.O. Box 329 |
| | Chestertown, MD 21620 USA |
| | T 410-778-3100 |
| | F 410-778-9748 |
| Emergency telephone numb | ber |
| | (CHEM-TEL):USA, Canada, Puerto Rico 1-800-255-3924 Outside North American Continent (Call |

collect) 813-248-0585

2. HAZARDS IDENTIFICATION

OSHA Regulatory Status

This product is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

EMERGENCY OVERVIEW

Appearance Clear, colorless

Physical state liquid

Odor vinegar

Precautionary Statements - Prevention Keep out of the reach of children.

Precautionary Statements - Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash before reuse.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF SWALLOWED:. Drink 1 or 2 glasses of water. Call a physician immediately.

Precautionary Statements - Storage Store in a well-ventilated place. Keep cool.

| 3. COMPOSITION/INFORMATION ON INGREDIENTS* | | |
|--|--------|----------|
| Chemical name | CAS No | Weight-% |

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5173 - UNIVERSAL EXTRACTING SOLUTION

| Acetic acid | 64-19-7 | 3 |
|----------------|-----------|---------|
| Sodium acetate | 6131-90-4 | 10 |
| Water | 7732-18-5 | to 100% |

| | 4. FIRST AID MEASURES |
|------------------------------------|---|
| First Aid Measures | |
| General advice | Do not get in eyes, on skin, or on clothing. Show this safety data sheet to the doctor in attendance. |
| Eye contact | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician. |
| Skin contact | Wash off immediately with soap and plenty of water for at least 15 minutes. Take off contaminated clothing and wash before reuse. If symptoms persist, call a physician. |
| Inhalation | Remove to fresh air. |
| Ingestion | Drink plenty of water. Consult a physician if necessary. |
| Self-protection of the first aider | Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Use personal protection recommended in Section 8. |

5. FIREFIGHTING MEASURES

Suitable extinguishing media

Water spray, dry chemical, carbon dioxide (CO2), or foam.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid contact with the skin and the eyes. See section 8.

Environmental precautions See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

Methods for containment Absorb/Cover spill with sodium bicarbonate or sodium carbonate to neutralize, then place in a chemical waste container for later disposal. Dispose according to federal, state, and local regulations. Dispose according to local regulations, if permitted dissolve in water and rinse to drain.

Methods for cleaning up After cleaning, flush away traces with water.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling

Handle in accordance with good industrial hygiene and safety practice. Prevent contact with skin, eyes, and clothing. Do not taste or swallow. Do not eat, drink, or smoke when using this product.

Conditions for safe storage, including any incompatibilities

5173 - UNIVERSAL EXTRACTING SOLUTION

Storage

Incompatible Products

Do not store in metal containers. Store away from strong acids and oxidizers.

Strong oxidizing agents. Strong acids. Metals.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

| Chemical name | ACGIH TLV | OSHA PEL | NIOSH IDLH |
|-----------------------------|-----------------------------|--|--|
| Acetic acid 64-19-7 | STEL: 15 ppm TWA: 10 ppm | TWA: 10 ppm TWA: 25 mg/m ³ (vacated) TWA: 10 ppm (vacated) TWA: 25 mg/m ³ | IDLH: 50 ppm TWA: 10 ppm TWA: 25 mg/m ³ STEL: 15 ppm STEL: 37 mg/m ³ |
| Sodium acetate 6131-90-4 | | - | Not Established |
| Water 7732-18-5 | • | - | Not Established |

Appropriate engineering controls

Engineering Measures

Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation, especially in confined areas.

| Individual protection measures | s, such as personal protective equipment |
|--------------------------------|--|
| Eye/Face Protection | Wear safety glasses with side shields (or goggles). Avoid contact with eyes. |
| Skin and body protection | Gloves & Lab Coat. |
| Respiratory protection | Maintain adequate ventilation. |

Hygiene Measures Avoid contact with eyes, skin and clothing. Handle in accordance with good industrial hygiene and safety practice. Wash hands and face before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

| Physical state | liquid | | | |
|--------------------------------|--------------------------|---------------|---------|--|
| Appearance | Clear, colorless | Odor | vinegar | |
| Property | Values | Remarks • Met | hod | |
| pH | 5 | | | |
| Melting point / freezing point | No information available | | | |
| Boiling point / boiling range | No information available | | | |
| Flash point | Not Applicable | | | |
| Evaporation rate | | | | |
| Flammability (solid, gas) | No information available | | | |
| Flammability Limit in Air | | | | |
| Upper flammability limit: | No information available | | | |
| Lower flammability limit: | No information available | | | |
| Vapor pressure | No information available | | | |
| Vapor density | No information available | | | |
| Specific gravity | No data available | | | |
| Water solubility | No information available | | | |
| Solubility in other solvents | No information available | | | |
| Partition coefficient | No information available | | | |
| Autoignition temperature | No information available | | | |
| Decomposition temperature | No information available | | | |
| Kinematic viscosity | No information available | | | |
| Dynamic viscosity | No information available | | | |

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5173 - UNIVERSAL EXTRACTING SOLUTION

| Explosive properties | No information available | |
|------------------------------|--|---|
| Oxidizing properties | No information available | |
| Other Information | | |
| Softening point | No information available | |
| Molecular weight | No information available | |
| VOC Content (%) | No information available | |
| Density | No information available | |
| Bulk density | No information available | |
| | 10. STABILITY AND REACTIVITY | |
| Stability | Stable under recommended storage conditions. | |
| Hazardous Reactions | Hazardous polymerization does not occur. | |
| Hazardous polymerization | Hazardous polymerization does not occur. | |
| Conditions to avoid | Excessive heat. | |
| Incompatible materials | Strong oxidizing agents. Strong acids. Metals. | |
| Hazardous decomposition prod | lucts Carbon oxides (COx). Nitrogen oxides (NOx). Sodium oxides. | |
| | 11. TOXICOLOGICAL INFORMATION | - |

11. TOXICOLOGICAL INFORMATION

| Information on likely | routes of exposure | |
|-----------------------|--------------------|------|
| Inhalation | None | know |

None known. May cause temporary eye irritation. Substance may cause slight skin irritation. May be harmful if swallowed. May cause gastrointestinal discomfort if consumed in large amounts.

Component identification

Eye contact

Skin contact

Ingestion

| Chemical name | ATEmix (oral) | ATEmix (dermal) | Inhalation LC50 |
|-----------------------------|--------------------|-----------------------|---------------------------------|
| Acetic acid 64-19-7 | = 3310 mg/kg (Rat) | = 1060 mg/kg (Rabbit) | = 11.4 mg/L (Rat) 4 h |
| Sodium acetate 6131-90-4 | = 3530 mg/kg (Rat) | > 10 g/kg (Rabbit) | > 30 g/m ³ (Rat) 1 h |
| Water 7732-18-5 | > 90 mL/kg(Rat) | Not Established | Not Established |

Information on toxicological effects

Carcinogenicity Chemical name Acetic acid 64-19-7 Sodium acetate There are no known carcinogenic chemicals in this product. ACGIH OSHA IARC NTP Not Established 6131-90-4 Not Established Not Established Not Established Not Established Water 7732-18-5

27,260.00 mg/kg 26,280.00 mg/kg ATEmix (oral) ATEmix (dermal)

12. ECOLOGICAL INFORMATION

Ecotoxicity

| Chemical name | Toxicity to Algae | Toxicity to Fish | Daphnia Magna (Water Flea) |
|---------------|-------------------|-------------------------------|-----------------------------|
| Acetic acid | Not Established | 75: 96 h Lepomis macrochirus | 47: 24 h Daphnia magna mg/L |
| 64-19-7 | | mg/L LC50 static 79: 96 h | EC50 65: 48 h Daphnia magna |
| | - | Pimephales promelas mg/L LC50 | mg/L EC50 Static |

Page 4/7

5173 - UNIVERSAL EXTRACTING SOLUTION

| | | static | |
|-----------------------------|-----------------|---|---------------------------------------|
| Sodium acetate 6131-90-4 | Not Established | 5000: 24 h Lepornis macrochirus mg/L LC50 static | 1000: 48 h Daphnia magna mg/L EC50 |
| Water 7732-18-5 | Not Established | Not Established | Not Established |

Persistence and degradability No information available.

Bioaccumulation/Accumulation No information available.

| Chemical name | Log Pow |
|-----------------------------|-----------------|
| Acetic acid 64-19-7 | -0.31 |
| Sodium acetate 6131-90-4 | Not Established |
| Water 7732-18-5 | Not Established |

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Dispose according to federal, state, and local regulations.

Contaminated packaging

Dispose of waste product or used containers according to local regulations.

| Chemical name | RCRA | RCRA - Basis for Listing | RCRA - D Series Wastes | RCRA - U Series Wastes |
|---|---|--|---|---|
| Acetic acid 64-19-7 | Not Established | | Not Established | Not Established |
| Sodium acetate 6131-90-4 | Not Established | - | Not Established | Not Established |
| Water 7732-18-5 | Not Established | - | Not Established | Not Established |
| | | | | |
| | | | | |
| Chemical name | RCRA - Halogenated Organic Compounds | RCRA - P Series Wastes | RCRA - F Series Wastes | RCRA - K Series Wastes |
| Chemical name Acetic acid 64-19-7 | | RCRA - P Series Wastes Not Established | RCRA - F Series Wastes Not Established | RCRA - K Series Wastes Not Established |
| Acetic acid | Organic Compounds | | | |

| Chemical name | California Hazardous Waste Status |
|-----------------------------|-----------------------------------|
| Acetic acid 64-19-7 | Toxic Corrosive Ignitable |
| Sodium acetate 6131-90-4 | • |
| Water 7732-18-5 | - |

14. TRANSPORT INFORMATION

| Not regulated |
|---------------|
| Not regulated |
| Not regulated |
| |

Page 5/7

IMDG/IMO

Not regulated

Not regulated

RID

15. REGULATORY INFORMATION

| International Inventories | |
|---------------------------|-----------------|
| TSCA | Complies |
| DSL/NDSL | Does not comply |
| EINECS/ELINCS | Does not comply |
| ENCS | Complies |
| IECSC | Complies |
| KECL | Does not comply |
| PICCS | Complies |
| AICS | Complies |

Legend: TSCA - United States Toxic Substances Control Act Section 8(b) Inventory DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances KECL - Korean Existing and Evaluated Chemical Substances PICCS - Philippines Inventory of Chemicals and Chemical Substances AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313 Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

| Chemical name | SARA 313 - Threshold Values % |
|-----------------------------------|-------------------------------|
| Acetic acid 64-19-7 | Not Established |
| Sodium acetate 6131-90-4 | Not Established |
| Water 7732-18-5 | Not Established |
| SARA 311/312 Hazard Categories | |
| Acute health hazard | Yes |
| Chronic Health Hazard | No |
| Fire hazard | No |
| Sudden release of pressure hazard | No |
| Reactive Hazard | No |

CWA (Clean Water Act) This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

| Chemical name | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants | CWA - Hazardous Substances |
|-----------------------------|--------------------------------|------------------------|---------------------------|-------------------------------|
| Acetic acid 64-19-7 | 5000 lb | Not Established | Not Established | X |
| Sodium acetate 6131-90-4 | Not Established | Not Established | Not Established | Not Established |
| Water 7732-18-5 | Not Established | Not Established | Not Established | Not Established |

CERCLA

| Chemical name | Hazardous Substances RQs | CERCLA/SARA RQ | RQ |
|---------------|--------------------------|----------------|----|
| | | | |



5173 - UNIVERSAL EXTRACTING SOLUTION

| Acetic acid 64-19-7 | 5000 lb | Not Established | RQ 5000 lb final RQ RQ 2270 kg final RC |
|-----------------------------|---------|-----------------|--|
| Sodium acetate 6131-90-4 | • | Not Established | |
| Water 7732-18-5 | - | Not Established | - |

US State Regulations

California Proposition 65

| Chemical name | California Proposition 65 | |
|-----------------------------|---------------------------|--|
| Acetic acid 64-19-7 | Not Established | |
| Sodium acetate 6131-90-4 | Not Established | |
| Water 7732-18-5 | Not Established | |

U.S. State Right-to-Know Regulations

| Chemical name | New Jersey | Massachusetts | Pennsylvania |
|-----------------------------|-----------------|-----------------|-----------------|
| Acetic acid 64-19-7 | X | x | x |
| Sodium acetate 6131-90-4 | Not Established | Not Established | Not Established |
| Water 7732-18-5 | Not Established | Not Established | X |

CPSC (Consumer Product Safety Commission) - Specially Regulated Substances

| Chemical name | (| Subs | Commission) - Specially Regulated tances |
|------------------------|------------------------|--|---|
| Acetic acid 64-19-7 | | Add POISON to lab | el, 16 CFR 1500.129 |
| | 16. OTHER INF | ORMATION | |
| Health hazard 1 | Flammability (| 0 Instability 0 | Physical and Chemical Hazards N/A |
| Flammability 0 | Stability 0 | | |
| | Acetic acid 64-19-7 | Acetic acid 64-19-7 16. OTHER INF Health hazard 1 Flammability (| Acetic acid 64-19-7 16. OTHER INFORMATION Health hazard 1 Flammability 0 Instability 0 |



Issuing Date Disclaimer Regulatory Affairs Department Jun-01-2015

The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of Safety Data Sheet

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Safety Data Sheet

OSHA format **Revision Number** 0

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

| Product identifier Product name | SOIL FLOCCULATING REAGENT ACRYLAMIDE HOMOPOLYMER IN H20 |
|------------------------------------|---|
| | |
| Other means of identificatio | n |
| Product Code(s) | 5643 |
| Recommended use of the cl | hemical and restrictions on use |
| Recommended Use | Laboratory chemicals. Industrial (not for food or food contact use). Use as a laboratory reagent. |
| Details of the supplier of the | e safety data sheet |
| | Manufacturer Address |
| | LaMotte Company, Inc. |
| | 802 Washington Avenue |
| | P.O. Box 329 |
| | Chestertown, MD 21620 USA |
| | T 410-778-3100 |
| | F 410-778-9748 |
| Emergency telephone numb | bers |
| (CHEM-TEL):USA, Canada, F | Puerto Rico 1-800-255-3924 Outside North American Continent (Call collect) 813-248-0585 |
| | |
| | 2. HAZARDS IDENTIFICATION |
| | |
| OSHA Regulatory Status | |
| This product is not considered | I hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200). |

EMERGENCY OVERVIEW

Appearance Clear, colorless

Physical state liquid

Odor Odorless

Precautionary Statements - Prevention

Do not handle until all safety precautions have been read and understood. Keep container tightly closed. Keep out of reach of children.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash before reuse. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF SWALLOWED. Drink 1 or 2 glasses of water. Call a physician immediately.

Storage:

Store in a well-ventilated place. Keep cool.

Unknown Acute Toxicity 0% of the mixture consists of ingredient(s) of unknown toxicity.

3. COMPOSITION/INFORMATION ON INGREDIENTS*

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| 4. FIRST AID MEASURES | | |
|------------------------------------|--|--|
| First Aid Measures | | |
| General advice | Do not get in eyes, on skin, or on clothing. | |
| Eye contact | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. In symptoms persist, call a physician. | |
| Skin contact | Wash off immediately with soap and plenty of water for at least 15 minutes. Take off contaminated clothing and wash before reuse. If skin irritation persists, call a physician. | |
| Inhalation | Remove to fresh air. | |
| Ingestion | Drink plenty of water, Never give anything by mouth to an unconscious person. | |
| Self-protection of the first aider | Use personal protection recommended in Section 8. | |
| Notes to Physician | For additional information, see Safety Data Sheet. Treat symptomatically. | |

5. FIREFIGHTING MEASURES

Suitable extinguishing media Water spray, dry chemical, carbon dioxide (CO 2), or foam.

Protective equipment and precautions for fireflighters As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

| | 6. ACCIDENTAL RELEASE MEASURES |
|----------------------------------|---|
| Personal precautions, protectiv | e equipment and emergency procedures |
| Personal precautions | Do not get in eyes, on skin, or on clothing. |
| Environmental precautions | See Section 12 for additional Ecological Information. |
| Methods and material for conta | inment and cleaning up |
| Methods for containment | Soak up with inert absorbent material, containerize, and hold for disposal. |
| Methods for cleaning up | After cleaning, flush away traces with water. |
| | 7. HANDLING AND STORAGE |
| Precautions for safe handling | |
| Handling | Handle in accordance with good industrial hygiene and safety practice. Do not taste or swallow. Do not eat, drink, or smoke when using this product. Prevent contact with skin, eyes, and clothing. |
| Conditions for safe storage, ind | cluding any incompatibilities |
| Storage: | Keep containers tightly closed in a dry, cool and well-ventilated place. Keep from freezing Keep out of the reach of children. |
| Incompatible Products | No materials to be especially mentioned. |
| 8. | EXPOSURE CONTROLS/PERSONAL PROTECTION |

Page 2/6

Control parameters

Appropriate engineering controlsEngineering MeasuresShowers
Eyewash stations
Ventilation systems.Individual protection measures, such as personal protective equipmentEye/Face ProtectionWear safety glasses with side shields (or goggles).Skin and body protectionGloves & Lab Coat. Impervious clothing. Protective gloves. Nitrile rubber.Hygiene MeasuresHandle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

| Physical state | liquid | | |
|--|---|---------------|----------|
| Appearance | Clear, colorless | Odor | Odorless |
| Property | Values | Remarks • Met | hod |
| pH | | | |
| Melting point / freezing point Boiling point / boiling range Flash point | No information available 100 °C No information available Not Applicable | | |
| Evaporation rate | | | |
| Flammability (solid, gas) Flammability Limit in Air | No information available | | |
| Upper flammability limit: | No information available | | |
| Lower flammability limit: | No information available | | |
| Vapor pressure | No information available | | |
| Vapor density | No information available | | |
| Specific gravity | No information available | | |
| Water solubility | No information available | | |
| Solubility in other solvents | No information available | | |
| Partition coefficient | No information available | | |
| Autoignition temperature | No information available | | |
| Decomposition temperature | No information available | | |
| Kinematic viscosity | No information available | | |
| Dynamic viscosity | No information available | | |
| Explosive properties | No information available | | |
| Oxidizing properties | No information available | | |
| Other Information | | | |
| Softening point | No information available | | |
| Molecular weight | No information available | | |
| VOC Content (%) | No information available | | |
| Density | No information available | | |
| Bulk density | No information available | | |
| | 10. STABILITY AND REA | ACTIVITY | |

Stability Hazardous polymerization Stable. Hazardous polymerization does not occur.

Conditions to avoid

Do not freeze.

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Incompatible materials

No materials to be especially mentioned.

Hazardous decomposition products None known based on information supplied.

11. TOXICOLOGICAL INFORMATION

Product Information

Product does not present an acute toxicity hazard based on known or supplied information

Information on likely routes of exposure

Component identification

Information on toxicological effects

Carcinogenicity **Chronic toxicity** There are no known carcinogenic chemicals in this product. No known effect.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Unknown Aquatic Toxicity 100 % of the mixture consists of components(s) of unknown hazards to the aquatic environment

Persistence and degradability No information available.

Bioaccumulation/Accumulation No information available.

13. DISPOSAL CONSIDERATIONS

| Disposal Methods | Dispose of waste product or used containers according to local regulations. Can be disposed as waste water, when in compliance with local regulations. |
|------------------|---|
| | |

Contaminated packaging Do not reuse empty containers.

14. TRANSPORT INFORMATION

DOT

Not regulated

Not regulated ATA IMDG/IMO Not regulated

15. REGULATORY INFORMATION

International Inventories TSCA DSL/NDSL EINECS/ELINCS

Does not comply Does not comply Does not comply

Page 4/6

| ENCS | Does not comply |
|-------|-----------------|
| IECSC | Does not comply |
| KECL | Does not comply |
| PICCS | Does not comply |
| AICS | Does not comply |

Legend: TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

| SARA 311/312 Hazard Categories | |
|-----------------------------------|----|
| Acute health hazard | No |
| Chronic Health Hazard | No |
| Fire hazard | No |
| Sudden release of pressure hazard | No |
| Reactive Hazard | No |

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

US State Regulations

U.S. State Right-to-Know Regulations

CPSC (Consumer Product Safety Commission) - Specially Regulated Substances

| 1 | | 16. OTHER INFORM | IATION | |
|-------------------------|-----------------------------------|-------------------------------|---------------|-------------------------------------|
| NFPA Health hazard 0 | Health hazard 0 Flammability 0 | Flammability 0 Stability 0 | Instability 0 | Physical and Chemica Hazards N/A |
| 0 | | | | |
| | > | | | |
| \checkmark | | | | |
| | | Page 5/6 | | |

5643 *- SOIL FLOCCULATING REAGENT ACRYLAMIDE HOMOPOLYMER IN H20

| Health Hazard | 0 |
|---------------|---|
| Ine Hazard | 0 |
| Reactivity | 0 |

Regulatory Affairs Department Jun-01-2015

Prepared by Issuing Date Disclaimer

Disclaimer The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of Safety Data Sheet

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Safety Data Sheet

Revision Number 0

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

| Product identifier Product name | TEXTURE DISPERSING REAGENT | |
|---|---|----------------------------------|
| Other means of identification | | |
| Product Code(s) | 5644 | |
| Recommended use of the chem Recommended Use | ical and restrictions on use Use as a laboratory reagent. Laboratory chemicals. Industria use). | al (not for food or food contact |
| Details of the supplier of the sa | fetv data sheet | |
| | Manufacturer Address | |
| | LaMotte Company, Inc. | |
| | 802 Washington Avenue P.O. Box 329 | |
| | Chestertown, MD 21620 USA | |
| | T 410-778-3100 | |
| | F 410-778-9748 | |
| Emergency telephone number 24 Hour Emergency Number (CHI collect) 813-248-0585 | EM-TEL):USA, Canada, Puerto Rico 1-800-255-3924 Outside Nor | th American Continent (Call |
| 1 | 2. HAZARDS IDENTIFICATION | |
| Not a dangerous substance or mix | xture according to the Globally Harmonized System (GHS) | |
| | EMERGENCY OVERVIEW | |
| Appearance Clear, colorless | Physical state liquid | Odor Odorless |
| | | |
| Precautionary Statements - Pre Do not handle until all safety preca children. | vention autions have been read and understood. Keep container tightly clo | osed. Keep out of reach of |
| IF IN EYES: Rinse cautiously with IF ON SKIN: Wash with plenty of a Take off contaminated clothing an | | easy to do. Continue rinsing. |
| IF INHALED: Remove victim to fre | esh air and keep at rest in a position comfortable for breathing sses of water, Call a physician immediately | |
| Precautionary Statements - Stor Store in a well-ventilated place. Ke | | |
| | | |
| | | |

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3. COMPOSITION/INFORMATION ON INGREDIENTS

| Chemical name | CAS No | Weight-% |
|----------------------------------|------------|----------|
| Sodium pyrophosphate decahydrate | 13472-36-1 | 2 |

| 4. FIRST AID MEASURES | | |
|------------------------------------|---|--|
| First Aid Measures | | |
| General advice | Do not get in eyes, on skin, or on clothing. Do not breathe dust/fume/gas/mist/vapors/spray. | |
| Eye contact | Immediately flush eyes with gentle stream of water for at least 15 minutes, occasionally lifting upper and lower eyelids. Call a physician immediately. | |
| Skin contact | Wash off immediately with soap and plenty of water for at least 15 minutes while removing all contaminated clothing and shoes. Consult a physician. | |
| Inhalation | Remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration and contact emergency personnel. | |
| Ingestion | Do NOT induce vomiting. Drink plenty of water. Clean mouth with water. Call a physician immediately. Never give anything by mouth to an unconscious person. | |
| Self-protection of the first aider | Use personal protective equipment. See section 8 for more information. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. | |

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Dry chemical, CO₂, water spray or alcohol-resistant foam.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

| | 6. ACCIDENTAL RELEASE MEASURES |
|---------------------------------|---|
| Personal precautions, protectiv | e equipment and emergency procedures |
| Personal precautions | Ensure adequate ventilation. Avoid contact with skin, eyes, and inhalation of vapors. Use personal protective equipment. See section 8. |
| Environmental precautions | See Section 12 for additional Ecological Information. |
| Methods and material for conta | inment and cleaning up |
| Methods for cleaning up | Containerize spill material and hold for later disposal. If local regulations permit, dissolve with large volume of water, neutralize with dilute acid (acetic, hydrochloric), then rinse to drain with excess water. After cleaning, flush away traces with water. |
| | 7. HANDLING AND STORAGE |

Precautions for safe handling

Handling

Handle in accordance with good industrial hygiene and safety practice. Prevent contact with

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skin, eyes, and clothing. Do not taste or swallow. Do not eat, drink, or smoke when using this product.

Conditions for safe storage, including any incompatibilities

Storage

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children.

Incompatible Products

Strong oxidizing agents.

No information available

No information available No information available

No information available No information available No information available No information available No information available

No information available

No information available

No information available

No information available

No information available

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Evaporation rate Flammability (solid, gas)

Flammability Limit in Air Upper flammability limit: Lower flammability limit:

Vapor pressure Vapor density Specific gravity Water solubility Solubility in other solvents

Autoignition temperature

Decomposition temperature

Partition coefficient

Kinematic viscosity

Dynamic viscosity

| Chemical name | ACGIH TLV | OSHA PEL | NIOSH IDLH |
|---|--|-----------------------------|--------------------------|
| Sodium pyrophosphate decahydrat 13472-36-1 | e - | - | TWA: 5 mg/m ³ |
| Appropriate engineering controls | 5 | | |
| Engineering Measures | Ensure adequate ventilation, es | pecially in confined areas. | |
| ndividual protection measures, | such as personal protective equip | ment | |
| Eye/Face Protection | Wear safety glasses with side s | hields (or goggles). | |
| Skin and body protection | Wear protective gloves/clothing. | | |
| Respiratory protection | When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. | | |
| Hygiene Measures | Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink o smoke when using this product. Wash hands before breaks and immediately after handling the product. | | |
| and the second se | 9. PHYSICAL AND CHEMI | CAL PROPERTIES | |
| Information on basic physical an | d chemical properties | | |
| Physical state | liquid | | |
| Appearance | Clear, colorless | Odor | Odorless |
| Property | Values | Remarks • Metho | d |
| pH | | No information ava | ilable |
| Melting point / freezing point Boiling point / boiling range Flash point | No information available No information available No information available | | |

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5644 TEXTURE DISPERSING REAGENT

| Explosive p Oxidizing p | |
|----------------------------|--|
| | |

Other Information

Softening point Molecular weight No information available No information available VOC Content (%) No information available Density No information available **Bulk density** No information available

10. STABILITY AND REACTIVITY

| Stability Hazardous polymerization | Stable under normal conditions of use and storage. Hazardous polymerization does not occur. |
|---------------------------------------|--|
| Conditions to avoid | Incompatible products. |
| Incompatible materials | Strong oxidizing agents. |
| Hazardous decomposition product | s Sodium and phosphorous oxides may form when heated to decomposition. |

No information available No information available

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Component Information

| Chemical name | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|----------------------------------|-------------------------|-----------------|-----------------|
| Sodium pyrophosphate decahydrate | 1000 - 3000 mg/kg (Rat) | Not Established | Not Established |

Information on toxicological effects

| Chemical name | ACGIH | IARC | NTP | OSHA |
|---|-----------------|-----------------|-----------------|-----------------|
| Sodium pyrophosphate decahydrate 13472-36-1 | Not Established | Not Established | Not Established | Not Established |

ATEmix (oral)

50000

12. ECOLOGICAL INFORMATION

Ecotoxicity

| Chemical name | Toxicity to Algae | Toxicity to Fish | Daphnia Magna (Water Flea) |
|--|-------------------|------------------|----------------------------|
| Sodium pyrophosphate decahydrate 13472-36-1 | Not Established | Not Established | Not Established |

Persistence and degradability No information available.

Bioaccumulation/Accumulation

No information available.

| Chemical name | Log Pow |
|--|-----------------|
| Sodium pyrophosphate decahydrate 13472-36-1 | Not Established |

| | 13. DISPOSAL CONSIDERATIONS | | |
|------------------------|--|----------------------------------|--|
| Disposal Methods | Dispose according to federal, state, and local regulations. to pH 7 with acid and rinse to drain with excess water. | If permitted, neutralize reagent | |
| Contaminated packaging | Do not reuse empty containers. | | |

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5644 TEXTURE DISPERSING REAGENT

| Chemical name | RCRA | RCRA - Basis for Listing | RCRA - D Series Wastes | RCRA - U Series Wastes |
|---|---|--------------------------|------------------------|-------------------------------|
| Sodium pyrophosphate decahydrate 13472-36-1 | Not Established | - | Not Established | Not Established |
| Chemical name | RCRA - Halogenated Organic Compounds | RCRA - P Series Wastes | RCRA - F Series Wastes | RCRA - K Series Wastes |
| Sodium pyrophosphate decahydrate 13472-36-1 | Not Established | Not Established | Not Established | Not Established |
| | chemical name | | California Hazardous W | aste Status |
| Sodium pyrophosphate decahydrate 13472-36-1 | | | | |

14. TRANSPORT INFORMATION

DOT

Not regulated

IATA

IMDG/IMO

Not regulated Not regulated

15. REGULATORY INFORMATION

| International Inventories |
|---------------------------|
| TSCA |
| DSL/NDSL |
| EINECS/ELINCS |
| ENCS |
| IECSC |
| KECL |
| PICCS |
| AICS |

Complies Does not comply Does not comply Complies Complies Does not comply Complies Complies

Legend: TSCA - United States Toxic Substances Control Act Section 8(b) Inventory DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENECS/ELINCS - European Inventory of Existing Chemical Substances ENCS - Japan Existing and New Chemical Substances IECSC - China Inventory of Existing Chemical Substances KECL - Korean Existing and Evaluated Chemical Substances PICCS - Philippines Inventory of Chemicals and Chemical Substances AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

| Chemical name | SARA 313 - Threshold Values % |
|--|-------------------------------|
| Sodium pyrophosphate decahydrate 13472-36-1 | Not Established |
| SARA 311/312 Hazard Categories | |
| Acute health hazard | No |
| Chronic Health Hazard | No |

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| Fire hazard | No |
|-----------------------------------|----|
| Sudden release of pressure hazard | No |
| Reactive Hazard | No |

CWA (Clean Water Act) This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

| Chemical name | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants | CWA - Hazardous Substances |
|---|--------------------------------|------------------------|---------------------------|-------------------------------|
| Sodium pyrophosphate decahydrate 13472-36-1 | Not Established | Not Established | Not Established | Not Established |

CERCLA This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

| Chemical name | Hazardous Substances RQs | CERCLA/SARA RQ | RQ |
|--|--------------------------|-----------------|----|
| Sodium pyrophosphate decahydrate 13472-36-1 | • | Not Established | - |

US State Regulations

California Proposition 65

| Chemical name | California Proposition 65 |
|--|---------------------------|
| Sodium pyrophosphate decahydrate 13472-36-1 | Not Established |
| 13472-36-1 e Right-to-Know Regulations | |

| Chemical name | New Jersey | Massachusetts | Pennsylvania |
|--|------------|---------------|--------------|
| Sodium pyrophosphate decahydrate 13472-36-1 | x | x | X |

CPSC (Consumer Product Safety Commission) - Specially Regulated Substances

| 16. OTHER INFORMATION | | | | | |
|--|----------------------|---|---------------|--|--|
| NFPA | Health hazard 1 | Flammability 0 | Instability 0 | Physical and Chemica Hazards N/A | |
| HMIS | Health hazard 1 | Flammability 0 | Stability 0 | | |
| | | | | | |
| Health Hazard Fire Hazard Reactivity | 1 | | | | |
| Prepared by Issuing Date | Regulate Jun-01-2 | | | | |
| Revision Date Reason for revision Disclaimer | Jul-01-2 New US | GHS format | | | |
| | | rect to the best of our kr led only as a guide for s | | and belief at the date of its essing, storage, | |

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transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of Material Safety Data Sheet

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Safety Data Sheet

Revision Number 0

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

| Product identifier Product name | Phoenborus Tablet |
|---|---|
| Product name | Phosphorus Tablet |
| Other means of identification | |
| Product Code(s) | 5706A |
| Recommended use of the ch | emical and restrictions on use |
| Recommended Use | Test kit reagent for water testing. Industrial (not for food or food contact use). Laboratory chemicals. |
| Details of the supplier of the | safety data sheet |
| | Manufacturer Address |
| | LaMotte Company, Inc. |
| | 802 Washington Avenue P.O. Box 329 |
| | Chestertown, MD 21620 USA |
| | T 410-778-3100 |
| | F 410-778-9748 |
| Emergency telephone number 24 Hour Emergency Number (C collect) 813-248-0585 | r HEM-TEL):USA, Canada, Puerto Rico 1-800-255-3924 Outside North American Continent (Call |
| | |
| | 2. HAZARDS IDENTIFICATION hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200) mixture according to the Globally Harmonized System (GHS) |
| This chemical is not considered | hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200) mixture according to the Globally Harmonized System (GHS) |
| This chemical is not considered | hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200) |
| This chemical is not considered Not a dangerous substance or | hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200) mixture according to the Globally Harmonized System (GHS) EMERGENCY OVERVIEW |
| This chemical is not considered Not a dangerous substance or Appearance White | hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200) mixture according to the Globally Harmonized System (GHS) <u>EMERGENCY OVERVIEW</u> Physical state Tablet ~0.1g (100mg) Odor Odorfe |
| This chemical is not considered Not a dangerous substance or Appearance White Precautionary Statements - F Do not handle until all safety pr | hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200) mixture according to the Globally Harmonized System (GHS) <u>EMERGENCY OVERVIEW</u> Physical state Tablet ~0.1g (100mg) Odor Odorfe |
| This chemical is not considered Not a dangerous substance or Appearance White Precautionary Statements - F Do not handle until all safety pr children. IF IN EYES: Rinse cautiously v IF ON SKIN: Wash with plenty | hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200) mixture according to the Globally Harmonized System (GHS) <u>EMERGENCY OVERVIEW</u> <u>Physical state Tablet ~0.1g (100mg)</u> <u>Odor Odork</u> revention ecautions have been read and understood. Keep container tightly closed. Keep out of reach of ith water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing of soap and water. |
| This chemical is not considered Not a dangerous substance or Appearance White Precautionary Statements - F Do not handle until all safety pr children. IF IN EYES: Rinse cautiously v IF ON SKIN: Wash with plenty Take off contaminated clothing IF INHALED: Remove victim to | hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200) mixture according to the Globally Harmonized System (GHS) <u>EMERGENCY OVERVIEW</u> <u>Physical state Tablet ~0.1g (100mg)</u> <u>Odor Odork</u> revention ecautions have been read and understood. Keep container tightly closed. Keep out of reach of ith water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing of soap and water. |
| This chemical is not considered Not a dangerous substance or Appearance White Precautionary Statements - F Do not handle until all safety pr children. IF IN EYES: Rinse cautiously v IF ON SKIN: Wash with plenty Take off contaminated clothing IF INHALED: Remove victim to | hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200) mixture according to the Globally Harmonized System (GHS) <u>EMERGENCY OVERVIEW</u> <u>Physical state Tablet ~0.1g (100mg)</u> <u>Odor Odork</u> revention ecautions have been read and understood. Keep container tightly closed. Keep out of reach of ith water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing of soap and water, and wash before reuse fresh air and keep at rest in a position comfortable for breathing glasses of water, Call a physician immediately torage |

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3. COMPOSITION/INFORMATION ON INGREDIENTS

| Chemical name CAS No | | | Weight-% | |
|------------------------------------|---|-----------------------|--|--|
| Stannous chloride | 10025-61-1 <2 | | | |
| Potassium chloride 7447-40-7 99 | | | 99 | |
| A STATISTICS | | | | |
| | 4. FIRST AID ME | ASURES | 100 | |
| First Aid Measures | | | | |
| General advice | Do not get in eyes, on skin, or o safety data sheet to the doctor dust/fume/gas/mist/vapors/spra | in attendance. Do not | ms persist, call a physician. Show this t breathe | |
| Eye contact | Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. If symptoms persist, call a physician. | | | |
| Skin contact | Consult a physician if necessary. Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. | | | |
| Inhalation | Remove to fresh air. Consult a physician. If breathing is irregular or stopped, administer artificial respiration. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. | | | |
| Ingestion | Rinse mouth. Drink plenty of water. If symptoms persist or develop contact physician. Do NOT induce vomiting. | | | |
| Self-protection of the first aider | Use personal protective equipm | nent. | | |
| | 5. FIRE-FIGHTING | MEASURES | | |

<u>Suitable extinguishing media</u> Water spray, dry chemical, carbon dioxide (CO₂), or foam.

Protective equipment and precautions for firefighters As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

| | 6. ACCIDENTAL RELEASE MEASURES | | | | |
|---|--|--|--|--|--|
| Personal precautions, protective equipment and emergency procedures | | | | | |
| Personal precautions | Ensure adequate ventilation. Avoid dust formation. Use personal protection recommended in Section 8. | | | | |
| Environmental precautions | Prevent entry into waterways, sewers, basements or confined areas. Do not flush into surface water or sanitary sewer system. See Section 12 for additional Ecological Information. | | | | |
| Methods and material for contai | inment and cleaning up | | | | |
| Methods for containment | Sweep up in a manner that does not dispurse dust and shovel into suitable containers for disposal. | | | | |
| Methods for cleaning up | Cover liquid spill with sand, earth or other noncombustible absorbent material. Cover | | | | |

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powder spill with plastic sheet or tarp to minimize spreading. Pick up and transfer to properly labeled containers.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling

Do not eat, drink, or smoke when using this product. Avoid contact with eyes, skin and clothing. Wear personal protective equipment. Take off contaminated clothing and wash before reuse. Do not breathe mist/vapors/spray.

Conditions for safe storage, including any incompatibilities

Storage Keep out of the reach of children. Keep container tightly closed in a dry and well-ventilated place.

Incompatible Products

None known based on information supplied.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

| Chemical name | ACGIH TLV | OSHA PEL | NIOSH IDLH |
|---------------------------------|-----------|----------|-----------------|
| Stannous chloride 10025-61-1 | | | Not Established |
| Potassium chloride 7447-40-7 | - | - | Not Established |

Appropriate engineering controls

| Engineering Measures | Showers Eyewash stations Ventilation systems. |
|--------------------------------|--|
| Individual protection measures | , such as personal protective equipment |
| Eye/Face Protection | Tightly fitting safety goggles. |
| Skin and body protection | Gloves & Lab Coat. |
| Respiratory protection | None required under normal usage. |
| Hygiene Measures | Handle in accordance with good industrial hygiene and safety practice. Avoid contact with eyes, skin and clothing. Wear suitable gloves and eye/face protection. Wash hands before breaks and at the end of workday. |

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

| Physical state Appearance | Tablet ~0.1g (100mg) White | Odor | Odorless |
|--|--|------------------|----------|
| Property | Values | Remarks • Method | |
| pH Melting point / freezing point Boiling point / boiling range Flash point | 3.25 No information available No information available Not Applicable No information available | (+/- 0.25) | |
| Evaporation rate Flammability (solid, gas) Flammability Limit in Air | No information available | | |

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5706A Phosphorus Tablet

| Upper flammability limit: | No information available |
|------------------------------|--|
| Lower flammability limit: | No information available |
| Vapor pressure | No information available |
| Vapor density | No information available |
| Specific gravity | No information available |
| Water solubility | Soluble in water |
| Solubility in other solvents | No information available |
| Partition coefficient | No information available |
| Autoignition temperature | No information available |
| Decomposition temperature | No information available |
| Kinematic viscosity | No information available |
| Dynamic viscosity | No information available |
| Explosive properties | No information available |
| Oxidizing properties | No information available |
| Other Information | |
| Softening point | No information available |
| Molecular weight | No information available |
| VOC Content (%) | No information available |
| Density | No information available |
| Bulk density | No information available |
| | 10. STABILITY AND REACTIVITY |
| | |
| Stability | Stable. |
| Hazardous Reactions | None under normal processing. |
| Hazardous polymerization | Hazardous polymerization does not occur. |
| | |

Conditions to avoidExposure to air or moisture over prolonged periods.Incompatible materialsNone known based on information supplied.Hazardous decomposition productsNone known.

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11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Component Information

| Chemical name | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|---------------------------------|--------------------|-----------------|-----------------|
| Stannous chloride 10025-61-1 | Not Established | Not Established | Not Established |
| Potassium chloride 7447-40-7 | = 2600 mg/kg (Rat) | Not Established | Not Established |

Information on toxicological effects

| Chemical name | ACGIH | IARC | NTP | OSHA |
|---------------------------------|-----------------|-----------------|-----------------|-----------------|
| Stannous chloride 10025-61-1 | Not Established | Not Established | Not Established | Not Established |
| Potassium chloride 7447-40-7 | Not Established | Not Established | Not Established | Not Established |

ATEmix (oral)

12. ECOLOGICAL INFORMATION

Ecotoxicity

| Unknown Aquatic Toxicity 1.59 % of | the mixture consists of compor | nents(s) of unknown hazard | s to the aquatic environment |
|------------------------------------|--------------------------------|----------------------------|------------------------------|
| Chemical name | Toxicity to Algae | Toxicity to Fish | Daphnia Magna (Water Flea) |
| Stannous chloride 10025-61-1 | Not Established | Not Established | Not Established |

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5706A Phosphorus Tablet

Revision Date Jul-06-2015

| Potassium chloride 7447-40-7 | 2500: 72 h Desmodesmus subspicatus mg/L EC50 | 750 - 1020: 96 h Pimephales promelas mg/L LC50 static 1060: 96 h Lepomis macrochirus mg/L LC50 static | |
|---------------------------------|---|--|--|
|---------------------------------|---|--|--|

Persistence and degradability No information available.

Bioaccumulation/Accumulation

| NO INOMIA | available. | |
|-----------|---------------|--|
| | Chemical name | |
| | | |

| Chemical name | Log Pow |
|---------------------------------|-----------------|
| Stannous chloride 10025-61-1 | Not Established |
| Potassium chloride 7447-40-7 | Not Established |

13. DISPOSAL CONSIDERATIONS

Disposal Methods

r

Dispose of waste product or used containers according to local regulations.

Contaminated packaging

Dispose of waste product or used containers according to local regulations.

| Chemical name | RCRA | RCRA - Basis for Listing | RCRA - D Series Wastes | RCRA - U Series Wastes |
|---------------------------------|---|--------------------------|-------------------------------|-------------------------------|
| Stannous chloride 10025-61-1 | Not Established | | Not Established | Not Established |
| Potassium chloride 7447-40-7 | Not Established | | Not Established | Not Established |
| Chemical name | RCRA - Halogenated Organic Compounds | RCRA - P Series Wastes | RCRA - F Series Wastes | RCRA - K Series Wastes |
| Stannous chloride 10025-61-1 | Not Established | Not Established | Not Established | Not Established |
| Potassium chloride | Not Established | Not Established | Not Established | Not Established |

| Chemical name | California Hazardous Waste Status |
|---------------------------------|-----------------------------------|
| Stannous chloride 10025-61-1 | • |
| Potassium chloride 7447-40-7 | - |

14. TRANSPORT INFORMATION

DOT

Not regulated

| IATA | Not regulated |
|----------|---------------|
| IMDG/IMO | Not regulated |

| | 15. REGULATORY INFORMATION | |
|---------------------------|----------------------------|---|
| International Inventories | | - |
| TSCA | Does not comply | |
| DSL/NDSL | Does not comply | |
| EINECS/ELINCS | Does not comply | |
| ENCS | Does not comply | |

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5706A Phosphorus Tablet

| Does not comply |
|-----------------|
| Does not comply |
| Does not comply |
| Does not comply |
| |

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

| Chemical name | SARA 313 - Threshold Values % |
|-----------------------------------|-------------------------------|
| Stannous chloride 10025-61-1 | Not Established |
| Potassium chloride 7447-40-7 | Not Established |
| SARA 311/312 Hazard Categories | |
| Acute health hazard | Yes |
| Chronic Health Hazard | No |
| Fire hazard | No |
| Sudden release of pressure hazard | No |
| Reactive Hazard | No |

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

| Chemical name | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants | CWA - Hazardous Substances |
|---------------------------------|--------------------------------|------------------------|---------------------------|-------------------------------|
| Stannous chloride 10025-61-1 | Not Established | Not Established | Not Established | Not Established |
| Potassium chloride 7447-40-7 | Not Established | Not Established | Not Established | Not Established |

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

| Chemical name | Hazardous Substances RQs | CERCLA/SARA RQ | RQ |
|---------------------------------|--------------------------|-----------------|----|
| Stannous chloride 10025-61-1 | | Not Established | |
| Potassium chloride 7447-40-7 | | Not Established | |

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals

| Chemical name | California Proposition 65 |
|---------------------------------|---------------------------|
| Stannous chloride 10025-61-1 | Not Established |
| Potassium chloride 7447-40-7 | Not Established |

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| Chemical name | New Jersey | Massachusetts | Pennsylvania |
|---------------------------------|-----------------|-----------------|-----------------|
| Stannous chloride 10025-61-1 | Not Established | Not Established | Not Established |
| Potassium chloride 7447-40-7 | Not Established | Not Established | Not Established |

CPSC (Consumer Product Safety Commission) - Specially Regulated Substances

| 16. OTHER INFORMATION | | | | |
|------------------------|-----------------|------------------------|---------------|-------------------------------------|
| NFPA | Health hazard 1 | Flammability 0 | Instability 0 | Physical and Chemica Hazards N/A |
| HMIS | Health hazard 1 | Flammability 0 | Stability 0 | Hazaros N/A |
| 1 | | | | |
| Health Hazard | 1 | | | |
| Reactivity Prepared by | 0 Regulate | ory Affairs Department | | |
| Issuing Date | Jun-01-2 | | | |
| Revision Date | Jul-06-2 | | | |
| Reason for revision | | GHS format | | |
| | | | | |

publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of Material Safety Data Sheet

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Safety Data Sheet

Revision Number 0

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

| Product identifier | |
|--------------------------------|--|
| Product name | Tricon pH Indicator |
| | |
| Other means of identification | |
| Product Code(s) | 5937 |
| UN-No | 1170 |
| Recommended use of the c | hemical and restrictions on use |
| Recommended Use | Use as a laboratory reagent. Industrial (not for food or food contact use). Laboratory chemicals. |
| Details of the supplier of the | e safety data sheet |
| | Manufacturer Address |
| | LaMotte Company, Inc. |
| | 802 Washington Avenue |
| | P.O. Box 329 |
| | Chestertown, MD 21620 USA |
| | T 410-778-3100 |
| | |
| | F 410-778-9748 |

Emergency telephone number 24 Hour Emergency Number (CHEM-TEL):USA, Canada, Puerto Rico 1-800-255-3924 Outside North American Continent (Call collect) 813-248-0585

2. HAZARDS IDENTIFICATION

| Serious eye damage/eye irritation | Category 2A | |
|--|-------------|--|
| Germ cell mutagenicity | Category 1B | |
| Carcinogenicity | Category 1A | |
| Reproductive Toxicity | Category 1A | |
| Specific target organ toxicity (single exposure) | Category 3 | |
| Specific target organ toxicity (repeated exposure) | Category 1 | |
| Physical hazards Flammable Liquids. | Category 3 | |

EMERGENCY OVERVIEW

DANGER

Hazard statements Causes serious eye irritation. May cause genetic defects. May cause cancer. May damage fertility or the unborn child. May cause respiratory irritation. May cause drowsiness or dizziness. Causes damage to organs through prolonged or repeated exposure. FLAMMABLE LIQUID AND VAPOR.



Appearance Clear yellow solution

Physical state liquid

Odor Alcohol

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5937 Tricon pH Indicator

Precautionary Statements - Prevention

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Wash face, hands and any exposed skin thoroughly after handling. Use only outdoors or in a well-ventilated area. Do not breathe dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product.

Precautionary Statements - Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash before reuse.

- IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

IF SWALLOWED. Drink 1 or 2 glasses of water. Call a physician immediately.

Precautionary Statements - Storage

Store locked up. Store in a well-ventilated place. Keep container tightly closed.

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant.

Other Hazards

May be harmful if swallowed Toxic to aquatic life with long lasting effects

3. COMPOSITION/INFORMATION ON INGREDIENTS

| Chemical name | CAS No | Weight-% |
|-----------------|-----------|----------|
| Phenolphthalein | 77-09-8 | <0.1 |
| Methyl alcohol | 67-56-1 | 3 |
| Water | 7732-18-5 | to 100% |
| Ethyl alcohol | 64-17-5 | 50 |

| 4. FIRST AID MEASURES | | |
|------------------------------------|--|--|
| First Aid Measures | | |
| General advice | Do not get in eyes, on skin, or on clothing. Consult a physician. | |
| Eye contact | Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician. | |
| Skin contact | Wash off immediately with plenty of water for at least 15 minutes. Consult a physician. | |
| Inhalation | Remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration and contact emergency personnel. Call a physician immediately. | |
| Ingestion | Drink 1 or 2 glasses of water. Do not induce vomiting without medical advice. Call a physician immediately. | |
| Self-protection of the first aider | Use personal protective equipment. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. | |

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Water spray, dry chemical, carbon dioxide (CO2), or foam.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full

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protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures Ensure adequate ventilation. Remove all sources of ignition. Use personal protection Personal precautions recommended in Section 8. Methods and material for containment and cleaning up Methods for containment Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container. Dispose according to federal, state, and local regulations. Methods for cleaning up After cleaning, flush away traces with water. 7, HANDLING AND STORAGE Precautions for safe handling Handling Handle in accordance with good industrial hygiene and safety practice. Prevent contact with skin, eyes, and clothing. Do not taste or swallow. Do not eat, drink, or smoke when using this product. Conditions for safe storage, including any incompatibilities Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat Storage and sources of ignition. Separate from acids. Keep away from oxidizing agents. Keep out of the reach of children.

Incompatible Products Nitric acid. Strong oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

| Chemical name | ACGIH TLV | OSHA PEL | NIOSH IDLH |
|----------------------------|------------------------------|--|--|
| Phenolphthalein 77-09-8 | - | - | Not Established |
| Methyl alcohol 67-56-1 | 250 ppm STEL TWA: 200 ppm | TWA: 200 ppm TWA: 260 mg/m ³ | IDLH: 6000 ppm TWA: 200 ppm TWA: 260 mg/m ³ STEL: 250 ppm STEL: 325 mg/m ³ |
| Water 7732-18-5 | • | • | Not Established |
| Ethyl alcohol 64-17-5 | 1000 ppm STEL | TWA: 1000 ppm TWA: 1900 mg/m ³ | IDLH: 3300 ppm TWA: 1000 ppm TWA: 1900 mg/m ³ |

Appropriate engineering controls

Engineering Measures

Showers Eyewash stations Ventilation systems.

 Individual protection measures, such as personal protective equipment

 Eye/Face Protection
 Wear safety glasses with side shields (or goggles).

Skin and body protection Nitrile rubber, Gloves & Lab Coat.

Respiratory protection Use only with adequate ventilation.

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Do not eat, drink or smoke when using this product.

9. PHYSICAL AND CHEMICAL PROPERTIES

| Physical state | liquid | | |
|--------------------------------|---------------------------------------|----------------|------------------------|
| Appearance | Clear yellow solution | Odor | Alcohol |
| Property | Values | Remarks • Me | ethod |
| pН | | Not Applicable | |
| Melting point / freezing point | No information available | | |
| Boiling point / boiling range | 78.5 °C / 173.3 °F | | |
| Flash point | 16 °C / 60.8 °F | Closed cup for | SDA (3A) Ethyl Alcohol |
| Evaporation rate | | | |
| Flammability (solid, gas) | No information available | | |
| Flammability Limit in Air | | | |
| Upper flammability limit: | 19% Ethanol | | |
| Lower flammability limit: | 3.3% Ethanol | | |
| Vapor pressure | 48 mmHg @ 20°C for SDA (3A) Ethyl | | |
| | Alcohol | | |
| Vapor density | 1.6 @ 20°C (Air=1) for SDA (3A) Ethyl | | |
| | Alcohol | | |
| Specific gravity | No information available | | |
| Water solubility | No information available | | |
| Solubility in other solvents | No information available | | |
| Partition coefficient | No information available | | |
| Autoignition temperature | 363 °C / 685 °F | | |
| Decomposition temperature | No information available | | |
| Kinematic viscosity | No information available | | |
| Dynamic viscosity | No information available | | |
| Explosive properties | No information available | | |
| Oxidizing properties | No information available | | |
| Other Information | | | |
| Softening point | No information available | | |
| Molecular weight | No information available | | |
| VOC Content (%) | No information available | | |
| Density | No information available | | |
| Bulk density | No information available | | |

Stability Hazardous polymerization

Stable under recommended storage conditions. Hazardous polymerization does not occur.

Conditions to avoidHeat, flames and sparks.Incompatible materialsNitric acid. Strong oxidizing agents.Hazardous decomposition productsCarbon oxides (COx).

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

| Chemical name | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|----------------------------|--------------------|------------------------|-------------------------------|
| Phenolphthalein 77-09-8 | Not Established | Not Established | Not Established |
| Methyl alcohol | = 6200 mg/kg (Rat) | = 15800 mg/kg (Rabbit) | = 22500 ppm (Rat) 8 h = 64000 |

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5937 Tricon pH Indicator

| 67-56-1 | | | ppm (Rat)4 h |
|--------------------------|--------------------|-----------------|------------------------|
| Water 7732-18-5 | > 90 mL/kg (Rat) | Not Established | Not Established |
| Ethyl alcohol 64-17-5 | = 7060 mg/kg (Rat) | Not Established | = 124.7 mg/L (Rat) 4 h |

Information on toxicological effects

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

| Chemical name | ACGIH | IARC | NTP | OSHA |
|----------------------------|-----------------|-----------------|------------------------|-----------------|
| Phenolphthalein 77-09-8 | Not Established | Group 2B | Reasonably Anticipated | x |
| Methyl alcohol 67-56-1 | Not Established | Not Established | Not Established | Not Established |
| Water 7732-18-5 | Not Established | Not Established | Not Established | Not Established |
| Ethyl alcohol 64-17-5 | A3 | Group 1 | Known | x |

Group 2B - Possibly Carcinogenic to Humans

Known - Known Carcinogan

Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

X - Present

Chronic toxicity

Ethanol has been shown to be a reproductive toxin only when consumed as an alcoholic beverage. Prolonged skin contact may cause skin irritation and/or dermatitis.

12. ECOLOGICAL INFORMATION

| Chemical name | Toxicity to Algae | Toxicity to Fish | Daphnia Magna (Water Flea) |
|----------------------------|-------------------|--|--|
| Phenolphthalein 77-09-8 | Not Established | Not Established | Not Established |
| Methyl alcohol 67-56-1 | Not Established | 13500 - 17600: 96 h Lepomis macrochirus mg/L LC50 flow-through 18 - 20: 96 h Oncorhynchus mykiss mL/L LC50 static 19500 - 20700: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 28200: 96 h Pimephales promelas mg/L LC50 flow-through 100: 96 h Pimephales promelas mg/L LC50 static | |
| Water 7732-18-5 | Not Established | Not Established | Not Established |
| Ethyl alcohol 64-17-5 | Not Established | 12.0 - 16.0: 96 h Oncorhynchus mykiss mL/L LC50 static 13400 - 15100: 96 h Pimephales promelas mg/L LC50 flow-through 100: 96 h Pimephales promelas mg/L LC50 static | 9268 - 14221: 48 h Daphnia magna mg/L LC50 10800: 24 h Daphnia magna mg/L EC50 2: 4 h Daphnia magna mg/L EC50 Static |

Persistence and degradability

Ethanol: When released into the soil, this material is expected to leach into groundwater. When released into the soil, this material is expected to quickly evaporate. When released into water, this material may evaporate to a moderate extent. When released into the air, this material is expected to be readily degraded by reaction with photochemically produced hydroxyl radicals. When released into the air, this material is expected to be readily removed from the atmosphere by dry and wet deposition. When released into the air, this material is expected to have a half-life between 1 and 10 days.

Bioaccumulation/Accumulation No information available.

| Chemical name | Log Pow |
|-----------------|-----------------|
| Phenolphthalein | Not Established |

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| 77-09-8 | |
|---------------------------|-----------------|
| Methyl alcohol 67-56-1 | -0.77 |
| Water 7732-18-5 | Not Established |
| Ethyl alcohol 64-17-5 | -0.32 |

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Dispose of waste product or used containers according to local regulations.

Contaminated packaging

Do not reuse empty containers.

| Chemical name | RCRA | RCRA - Basis for Listing | RCRA - D Series Wastes | RCRA - U Series Wastes |
|----------------------------|-----------------|-----------------------------------|------------------------|-------------------------------|
| Phenolphthalein 77-09-8 | Not Established | | Not Established | Not Established |
| Methyl alcohol 67-56-1 | Not Established | Included in waste stream: F039 | Not Established | Ignitable waste |
| Water 7732-18-5 | Not Established | - | Not Established | Not Established |
| Ethyl alcohol 64-17-5 | Not Established | - | Not Established | Not Established |

| enermour manne | Organic Compounds | | | |
|----------------------------|-------------------|-----------------|-----------------|-----------------|
| Phenolphthalein 77-09-8 | Not Established | Not Established | Not Established | Not Established |
| Methyl alcohol 67-56-1 | Not Established | Not Established | Not Established | Not Established |
| Water 7732-18-5 | Not Established | Not Established | Not Established | Not Established |
| Ethyl alcohol 64-17-5 | Not Established | Not Established | Not Established | Not Established |

| Chemical name | California Hazardous Waste Status |
|----------------------------|-----------------------------------|
| Phenolphthalein 77-09-8 | - |
| Methyl alcohol 67-56-1 | - |
| Water 7732-18-5 | - |
| Ethyl alcohol 64-17-5 | - |

14. TRANSPORT INFORMATION

DOT

| Proper shipping name | |
|----------------------|--|
| UN-No | |
| Hazard Class | |
| Packing group | |

ETHANOL SOLUTION (Ethyl Alcohol Solution) 1170 3 II

| IATA | |
|----------------------|---|
| Proper shipping name | ETHANOL SOLUTION (Ethyl Alcohol Solution) |
| UN-No | 1170 |
| Hazard Class | 3 |
| Packing group | 11 |

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5937 Tricon pH Indicator

| Proper shipping name | ETHANOL SOLUTION (Ethyl Alcohol Solution |
|----------------------|--|
| UN-No | 1170 |
| Hazard Class | 3 |
| Packing group | 11 |

Does not comply Complies

Complies Does not comply

Complies Complies Complies Complies

15. REGULATORY INFORMATION

| International Inventories | |
|---------------------------|--|
| TSCA | |
| DSL/NDSL | |
| EINECS/ELINCS | |
| ENCS | |
| IECSC | |
| KECL | |
| PICCS | |
| AICS | |

Legend: TSCA - United States Toxic Substances Control Act Section 8(b) Inventory DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances KECL - Korean Existing and Evaluated Chemical Substances PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

| Chemical name | SARA 313 - Threshold Values % | | | |
|-----------------------------------|-------------------------------|--|--|--|
| Phenolphthalein 77-09-8 | Not Established | | | |
| Methyl alcohol 67-56-1 | 1.0 | | | |
| Water 7732-18-5 | Not Established | | | |
| Ethyl alcohol 64-17-5 | Not Established | | | |
| ARA 311/312 Hazard Categories | | | | |
| Acute health hazard | Yes | | | |
| Chronic Health Hazard | Yes | | | |
| Fire hazard | Yes | | | |
| Sudden release of pressure hazard | No | | | |
| Reactive Hazard | No | | | |

CWA (Clean Water Act) This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

| Chemical name | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants | CWA - Hazardous Substances |
|----------------------------|--------------------------------|------------------------|---------------------------|-------------------------------|
| Phenolphthalein 77-09-8 | Not Established | Not Established | Not Established | Not Established |
| Methyl alcohol 67-56-1 | Not Established | Not Established | Not Established | Not Established |
| Water 7732-18-5 | Not Established | Not Established | Not Established | Not Established |

5937 Tricon pH Indicator

Revision Date Oct-20-2015

| Ethyl alcohol 64-17-5 | Not Established | Not Established | Not Established | Not Established |
|--------------------------|-----------------|-----------------|-----------------|-----------------|
|--------------------------|-----------------|-----------------|-----------------|-----------------|

CERCLA This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

| Chemical name | Hazardous Substances RQs | CERCLA/SARA RQ | RQ |
|----------------------------|--------------------------|-----------------|--|
| Phenolphthalein 77-09-8 | • | Not Established | |
| Methyl alcohol 67-56-1 | 5000 lb | Not Established | RQ 5000 lb final RQ RQ 2270 kg final RQ |
| Water 7732-18-5 | - | Not Established | |
| Ethyl alcohol 64-17-5 | | Not Established | |

US State Regulations

California Proposition 65

WARNING! This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm

| (Ethyl alcohol is only considered a Proposition 65 cancer a | and developmental hazard when it is ingested as an alcoholic beverage) |
|---|--|
| | |

| Chemical name | California Proposition 65 | |
|----------------------------|---------------------------|--|
| Phenolphthalein 77-09-8 | Carcinogen | |
| Methyl alcohol 67-56-1 | Developmental | |
| Water 7732-18-5 | Not Established | |
| Ethyl alcohol 64-17-5 | Carcinogen | |

U.S. State Right-to-Know Regulations

| Chemical name | New Jersey | Massachusetts | Pennsylvania |
|----------------------------|-----------------|-----------------|-----------------|
| Phenolphthalein 77-09-8 | x | Not Established | Not Established |
| Methyl alcohol 67-56-1 | x | x | x |
| Water 7732-18-5 | Not Established | Not Established | x |
| Ethyl alcohol 64-17-5 | x | X | x |

CPSC (Consumer Product Safety Commission) - Specially Regulated Substances

| Chemical name | | | CPSC (Consumer Product Safety Commission) - Specially Regulated Substances | | |
|---------------------------|-----------------|--------------|--|---------------|--------------------------------------|
| Methyl alcohol 67-56-1 | | | Special labeling, 16 CFR 1500.14 (including mixtures containing >= by weight) | | |
| | | 16. OTHER IN | FORM | ATION | |
| NFPA | Health hazard 1 | Flammability | 3 | Instability 0 | Physical and Chemical Hazards N/A |
| HMIS | Health hazard 2 | Flammability | 3 | Stability 0 | |

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5937 Tricon pH Indicator



Prepared by Issuing Date Disclaimer Regulatory Affairs Department Jun-22-2015

The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of Safety Data Sheet

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Safety Data Sheet

OSHA format **Revision Number** 0

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Revision Date Jan-14-2016

Product identifier **Product name**

TRICON FLOCCULATING SOLUTION

Other means of identification 5941 Product Code(s)

 Recommended use of the chemical and restrictions on use

 Recommended Use
 Laboratory chemicals. Industrial (not for food or food contact use).

Details of the supplier of the safety data sheet LaMotte Company, Inc.

802 Washington Avenue P.O. Box 329 Chestertown, MD 21620 USA T 410-778-3100 F 410-778-9748

Emergency telephone number 24 Hour Emergency Number (CHEM-TEL):USA, Canada, Puerto Rico 1-800-255-3924 Outside North American Continent (Call collect) 813-248-0585

2. HAZARDS IDENTIFICATION

OSHA Regulatory Status

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

EMERGENCY OVERVIEW

Appearance Clear, colorless

Physical state liquid

Odor None

Precautionary Statements - Prevention Keep out of the reach of children.

Precautionary Statements - Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash before reuse. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

IF SWALLOWED. Drink 1 or 2 glasses of water. Call a physician immediately.

Precautionary Statements - Storage Store in a well-ventilated place. Keep cool.

3. COMPOSITION/INFORMATION ON INGREDIENTS

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5941 - TRICON FLOCCULATING SOLUTION Revision Date Jan-14-2016

| Chemical name | CAS No | Weight-% |
|-----------------|-----------|----------|
| Polyacrylamides | 9003-05-8 | <0.01 |
| Water | 7732-18-5 | to 100% |

| | 4. FIRST AID MEASURES |
|------------------------------------|--|
| First Aid Measures | |
| General advice | Do not get in eyes, on skin, or on clothing. |
| Eye contact | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If irritation persists or develops, contact a physician. |
| Skin contact | Wash skin with soap and water. If irritation develops or persists, consult physician. |
| Inhalation | Not expected to require first aid measures. |
| Ingestion | Drink 1 or 2 glasses of water. If gastrointestinal distress occurs contact physician. |
| Self-protection of the first aider | Use personal protective equipment. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. |
| Notes to Physician | Treat symptomatically. |
| | 5. FIRE-FIGHTING MEASURES |

Suitable extinguishing media Water spray, dry chemical, carbon dioxide (CO₂), or foam.

Protective equipment and precautions for firefighters As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

| | 6. ACCIDENTAL RELEASE MEASURES | | |
|----------------------------------|---|--|--|
| Personal precautions, protectiv | e equipment and emergency procedures | | |
| Personal precautions | See section 8. | | |
| Environmental precautions | See Section 12 for additional Ecological Information. | | |
| Methods and material for conta | inment and cleaning up | | |
| Methods for containment | Soak up with inert absorbent material, containerize, and hold for disposal. Dispose according to federal, state, and local regulations. | | |
| Methods for cleaning up | After cleaning, flush away traces with water. | | |
| | 7. HANDLING AND STORAGE | | |
| Precautions for safe handling | | | |
| Handling | Handle in accordance with good industrial hygiene and safety practice. Prevent contact with skin, eyes, and clothing. Do not taste or swallow. Do not eat, drink, or smoke when using this product. | | |
| Conditions for safe storage, inc | luding any incompatibilities | | |
| Storage | Keep tightly closed in a dry and cool place. Keep out of the reach of children. | | |
| | Page 2/7 | | |

Incompatible Products

None known.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

| Chemical name | ACGIH TLV | OSHA PEL | NIOSH IDLH |
|---------------------------------|--|-----------------------|-----------------|
| Polyacrylamides 9003-05-8 | | | Not Established |
| Water 7732-18-5 | - | - | Not Established |
| Appropriate engineering control | ols | | |
| Engineering Measures | Showers Eyewash stations | | |
| Individual protection measures | Ventilation systems. | ipment | |
| Individual protection measures | Ventilation systems. a such as personal protective equi Wear safety glasses with side | | |
| | s, such as personal protective equi | | |
| Eye/Face Protection | e, such as personal protective equi Wear safety glasses with side | shields (or goggles). | |

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

| Physical state | liquid | | |
|--------------------------------|--------------------------|-----------------|------|
| Appearance | Clear, colorless | Odor | None |
| Property | Values | Remarks • Metho | bd |
| pH | 6 | | |
| Melting point / freezing point | No information available | | |
| Boiling point / boiling range | No information available | | |
| Flash point | No information available | | |
| Evaporation rate | | | |
| Flammability (solid, gas) | No information available | | |
| Flammability Limit in Air | | | |
| Upper flammability limit: | No information available | | |
| Lower flammability limit: | No information available | | |
| Vapor pressure | No information available | | |
| Vapor density | No information available | | |
| Specific gravity | No information available | | |
| Water solubility | No information available | | |
| Solubility in other solvents | No information available | | |
| Partition coefficient | No information available | | |
| Autoignition temperature | No information available | | |
| Decomposition temperature | No information available | | |
| Kinematic viscosity | No information available | | |
| Dynamic viscosity | No information available | | |
| Explosive properties | No information available | | |
| Oxidizing properties | No information available | | |
| Other Information | | | |
| Softening point | No information available | | |
| | Page 3/7 | | |

| Molecular weight VOC Content (%) Density Bulk density | No information available No information available No information available No information available | |
|--|--|--|
| | 10. STABILITY AND REACTIVITY | |
| Stability Hazardous polymerization | Stable under normal conditions of use and storage. Hazardous polymerization does not occur. | |

 Conditions to avoid
 Extremes of temperature and direct sunlight.

 Incompatible materials
 None known.

 Hazardous decomposition products
 None under normal use.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Component Information

| Chemical name | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|------------------------------|-----------------|-----------------|-----------------|
| Polyacrylamides 9003-05-8 | > 1 g/kg (Rat) | Not Established | Not Established |
| Water 7732-18-5 | > 90 mL/kg(Rat) | Not Established | Not Established |

Information on toxicological effects

Carcinogenicity Contains no ingredient listed as a carcinogen.

| Chemical name | ACGIH | IARC | NTP | OSHA |
|------------------------------|-----------------|-----------------|-----------------|-----------------|
| Polyacrylamides 9003-05-8 | Not Established | Not Established | Not Established | Not Established |
| Water 7732-18-5 | Not Established | Not Established | Not Established | Not Established |

12. ECOLOGICAL INFORMATION

Ecotoxicity

| Chemical name | Toxicity to Algae | Toxicity to Fish | Daphnia Magna (Water Flea) |
|------------------------------|-------------------|------------------|----------------------------|
| Polyacrylamides 9003-05-8 | Not Established | Not Established | Not Established |
| Water 7732-18-5 | Not Established | Not Established | Not Established |

Persistence and degradability No information available.

Bioaccumulation/Accumulation

No information available.

| Chemical name | Log Pow |
|------------------------------|-----------------|
| Polyacrylamides 9003-05-8 | Not Established |
| Water 7732-18-5 | Not Established |

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Dispose of waste product or used containers according to local regulations. This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is

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processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

Contaminated packaging

Do not reuse empty containers.

| Chemical name | RCRA | RCRA - Basis for Listing | RCRA - D Series Wastes | RCRA - U Series Wastes |
|------------------------------|---|--------------------------|------------------------|------------------------|
| Polyacrylamides 9003-05-8 | Not Established | • | Not Established | Not Established |
| Water 7732-18-5 | Not Established | | Not Established | Not Established |
| Chemical name | RCRA - Halogenated Organic Compounds | RCRA - P Series Wastes | RCRA - F Series Wastes | RCRA - K Series Wastes |
| Polyacrylamides 9003-05-8 | Not Established | Not Established | Not Established | Not Established |
| Water 7732-18-5 | Not Established | Not Established | Not Established | Not Established |
| | Chemical name | | California Hazardous W | aste Status |
| Polyacrylamides 9003-05-8 | | | | |
| Water 7732-18-5 | | | - | |

14. TRANSPORT INFORMATION

DOT

Not regulated

| ATA | Not regulated |
|----------|---------------|
| IMDG/IMO | Not regulated |

15. REGULATORY INFORMATION

| International Inventories | |
|---------------------------|-----------------|
| TSCA | Complies |
| DSL/NDSL | Complies |
| EINECS/ELINCS | Does not comply |
| ENCS | Complies |
| IECSC | Complies |
| KECL | Complies |
| PICCS | Complies |
| AICS | Complies |

Legend: TSCA - United States Toxic Substances Control Act Section 8(b) Inventory DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances ENCS - Japan Existing and New Chemical Substances IECSC - China Inventory of Existing Chemical Substances KECL - Korean Existing and Evaluated Chemical Substances PICCS - Philippines Inventory of Chemicals and Chemical Substances AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313

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Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

| Chemical name | SARA 313 - Threshold Values % |
|-----------------------------------|-------------------------------|
| Polyacrylamides 9003-05-8 | Not Established |
| Water 7732-18-5 | Not Established |
| SARA 311/312 Hazard Categories | |
| Acute health hazard | No |
| Chronic Health Hazard | No |
| Fire hazard | No |
| Sudden release of pressure hazard | No |
| Reactive Hazard | No |

CWA (Clean Water Act) This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

| Chemical name | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants | CWA - Hazardous Substances |
|------------------------------|--------------------------------|------------------------|---------------------------|-------------------------------|
| Polyacrylamides 9003-05-8 | Not Established | Not Established | Not Established | Not Established |
| Water 7732-18-5 | Not Established | Not Established | Not Established | Not Established |

CERCLA This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

| Chemical name | Hazardous Substances RQs | CERCLA/SARA RQ | RQ |
|------------------------------|--------------------------|-----------------|----|
| Polyacrylamides 9003-05-8 | • | Not Established | |
| Water 7732-18-5 | | Not Established | |

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals

| Chemical name | California Proposition 65 | |
|------------------------------|---------------------------|--|
| Polyacrylamides 9003-05-8 | Not Established | |
| Water 7732-18-5 | Not Established | |

U.S. State Right-to-Know Regulations

| Chemical name | New Jersey | Massachusetts | Pennsylvania |
|------------------------------|-----------------|-----------------|-----------------|
| Polyacrylamides 9003-05-8 | Not Established | Not Established | Not Established |
| Water 7732-18-5 | Not Established | Not Established | x |

CPSC (Consumer Product Safety Commission) - Specially Regulated Substances

16. OTHER INFORMATION

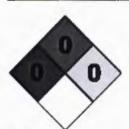
NFPA

Health hazard 0

Flammability 0 Instability 0 **Physical and Chemical** Hazards N/A

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5941 - TRICON FLOCCULATING SOLUTION Revision Date Jan-14-2016



Prepared by Issuing Date Revision Date Disclaimer Regulatory Affairs Department Nov-29-2012 Jan-14-2016

The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of Safety Data Sheet

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Safety Data Sheet

OSHA format Revision Number 0

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

| Product | identifier |
|---------|------------|
| Product | name |

PH WIDE RANGE (FOR COLOR Q)

Revision Date Aug-23-2017

Other means of identification Product Code(s) 7059

Recommended use of the chemical and restrictions on use

Recommended Use Use as a laboratory reagent. Industrial (not for food or food contact use). Laboratory chemicals.

Details of the supplier of the safety data sheet

Manufacturer Address LaMotte Company, Inc. 802 Washington Avenue P.O. Box 329 Chestertown, MD 21620 USA T 410-778-3100 F 410-778-9748

Emergency telephone numbers

(CHEM-TEL):USA, Canada, Puerto Rico 1-800-255-3924 Outside North American Continent (Call collect) 813-248-0585

2. HAZARDS IDENTIFICATION

OSHA Regulatory Status

This product is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

EMERGENCY OVERVIEW

Appearance Deep Purple liquid

Physical state liquid

Odor None

Precautionary Statements - Prevention

Keep out of the reach of children.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash before reuse. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF SWALLOWED:, Drink 1 or 2 glasses of water.

Storage: Store in a well-ventilated place. Keep cool.

3. COMPOSITION/INFORMATION ON INGREDIENTS*

4. FIRST AID MEASURES

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| Sen-protection of the mat alder | inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. |
|------------------------------------|---|
| Self-protection of the first aider | Use personal protective equipment. Do not use mouth-to-mouth method if victim ingested o |
| Ingestion | Drink 1 or 2 glasses of water. Do not induce vomiting without medical advice. Call a physician immediately. |
| Inhalation | Remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration and contact emergency personnel. Call a physician immediately. |
| Skin contact | Wash off immediately with plenty of water for at least 15 minutes. Consult a physician. |
| Eye contact | Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician. |
| General advice | Do not get in eyes, on skin, or on clothing. Consult a physician. |
| First Aid Measures | |

5. FIREFIGHTING MEASURES

Suitable extinguishing media Water spray, dry chemical, carbon dioxide (CO 2), or foam.

Protective equipment and precautions for firefighters As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

| | 6. ACCIDENTAL RELEASE MEASURES |
|----------------------------------|--|
| Personal precautions, protectiv | e equipment and emergency procedures |
| Personal precautions | See section 8. Ensure adequate ventilation. Remove all sources of ignition. |
| Environmental precautions | See Section 12 for additional Ecological Information. |
| Methods and material for conta | inment and cleaning up |
| Methods for containment | Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container. Dispose according to federal, state, and local regulations. |
| Methods for cleaning up | After cleaning, flush away traces with water. |
| | 7. HANDLING AND STORAGE |
| Precautions for safe handling | |
| Handling | Handle in accordance with good industrial hygiene and safety practice. Prevent contact with skin, eyes, and clothing. Do not taste or swallow. Do not eat, drink, or smoke when using this product. |
| Conditions for safe storage, inc | luding any incompatibilities |
| Storage: | Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from hear and sources of ignition. Separate from acids. Keep away from oxidizing agents. Keep out of the reach of children. |
| Incompatible Products | NITRIC ACID. Strong oxidizing agents. |
| 8. | EXPOSURE CONTROLS/PERSONAL PROTECTION |

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Control parameters

Appropriate engineering controls

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| Engineering Measures | Showers Eyewash stations Ventilation systems. | | | |
|--|--|-----------------------|------|--|
| Individual protection measures, | such as personal protective equip | ment | | |
| Eye/Face Protection | Wear safety glasses with side s | hields (or goggles). | | |
| Skin and body protection | Nitrile rubber. Gloves & Lab Coa | at. | | |
| Respiratory protection | Use only with adequate ventilation | on. | | |
| Hygiene Measures | Do not eat, drink or smoke when | n using this product. | | |
| | 9. PHYSICAL AND CHEMIC | CAL PROPERTIES | | |
| Information on basic physical an | id chemical properties | | | |
| Physical state | liquid | | | |
| Appearance | Deep Purple liquid | Odor | None | |
| Color | purple | | | |
| Property | Values | Remarks • Met | hod | |
| pH | 7.25 | | | |
| Melting point / freezing point | No information available | | | |
| Boiling point / boiling range | No information available | | | |
| Flash point | Not Applicable | | | |
| Evaporation rate | | | | |
| Flammability (solid, gas) | No information available | | | |
| Flammability Limit in Air | | | | |
| Upper flammability limit: | No information available | | | |
| Lower flammability limit: | No information available | | | |
| Vapor pressure | No information available | | | |
| Vapor density | No information available No information available | | | |
| Specific gravity | No information available | | | |
| Water solubility Solubility in other solvents | No information available | | | |
| Partition coefficient | No information available | | | |
| Autoignition temperature | No information available | | | |
| Decomposition temperature | No information available | | | |
| Kinematic viscosity | No information available | | | |
| Dynamic viscosity | No information available | | | |
| Explosive properties | No information available | | | |
| Oxidizing properties | No information available | | | |
| Other Information | | | | |
| | No information quality is | | | |
| Softening point | No information available No information available | | | |
| Molecular weight VOC Content (%) | No information available | | | |
| Density | No information available | | | |
| LAND AND A LAND AND A LAND A | | | | |
| Bulk density | No information available | | | |

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| Stability Hazardous polymerization | Stable under normal conditions of use and storage. Hazardous polymerization does not occur. | |
|---------------------------------------|--|--|
| Conditions to avoid | Heat, flames and sparks. | |
| Incompatible materials | NITRIC ACID. Strong oxidizing agents. | |

Hazardous decomposition products Carbon oxides (COx).

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Component identification

Information on toxicological effects

12. ECOLOGICAL INFORMATION

Ecotoxicity

Persistence and degradability No information available.

Bioaccumulation/Accumulation No information available.

| 13. | DISPOSAL | CONSIDERAT | TIONS | |
|-----|----------|------------|-------|--|
| | | | | |

Dispose of waste product or used containers according to local regulations.

Disposal Methods

Contaminated packaging

Do not reuse empty containers.

| 14. | TRANSP | ORT INF | ORMATION | |
|-----|--------|---------|----------|--|
| | | | | |

DOT

Not regulated

IATA Not regulated
IMDG/IMO Not regulated

| and the second | 15. REGULATORY INFORMATION |
|--|---|
| International Inventories TSCA DSL/NDSL EINECS/ELINCS ENCS IECSC | Complies Complies Complies Does not comply Complies |
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| KECL | Does not comply | |
|-------|-----------------|--|
| PICCS | Complies | |
| AICS | Complies | |

Legend: TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

| SARA 311/312 Hazard Categories | |
|-----------------------------------|----|
| Acute health hazard | No |
| Chronic Health Hazard | No |
| Fire hazard | No |
| Sudden release of pressure hazard | No |
| Reactive Hazard | No |

CWA (Clean Water Act) This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive and Liability Act (CERCLA) (40 CER 302) or the Superfund Amendments and Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

US State Regulations

U.S. State Right-to-Know Regulations

CPSC (Consumer Product Safety Commission) - Specially Regulated Substances

| Health hazard 0 | Flammability 0 | Instability 0 | Physical and Chemica Hazards N/A |
|-----------------|----------------|---------------|-------------------------------------|
| Flammability 0 | Stability 0 | | |
| , | | | |
| | | | |
| | | | |

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| Health Hazard | 0 |
|---------------|---|
| Fire Hazard | 0 |
| Reactivity | 0 |

Prepared by Issuing Date Revision Date Reason for revision <u>Disclaimer</u> Regulatory Affairs Department May-02-2012 Aug-23-2017 SDS sections updated 2 9 11 12 16

The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of Safety Data Sheet

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