

2021.

SB46410

OUTBREAK!



AN INTERACTIVE EPIDEMIOLOGY SIMULATION

FROM
THETA TECHNOLOGIES

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FLINN SCIENTIFIC, INC.

Safety Data Sheet (SDS)

SDS #: 591.00

Revision Date: March 21, 2014

SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

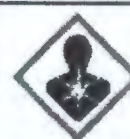
Phenolphthalein

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **DANGER**

Pictograms



SECTION 2 – HAZARDS IDENTIFICATION

Hazard class: Germ cell mutagenicity (Category 2). Suspected of causing genetic defects (H341). Obtain special instructions before use (P201). Do not handle until all safety precautions have been read and understood (P202). Use personal protective equipment as required (P281).

Hazard class: Carcinogenicity (Category 1B). May cause cancer (H350). Phenolphthalein is categorized as "Reasonably anticipated to be a human carcinogen" by the National Toxicology Program (first listed in 2000).

Hazard class: Reproductive toxicity (Category 2). Suspected of damaging fertility or the unborn child (H361).

SECTION 3 – COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Phenolphthalein	77-09-8	C ₂₀ H ₁₄ O ₄	318.31	
Synonym: 3,3-Bis(4-hydroxyphenol)-1(3H)-isobenzofuranone				

SECTION 4 – FIRST AID MEASURES

If exposed or concerned: Get medical advice or attention (P308+P313).

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

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.

If on skin: Wash with plenty of water.

If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 – FIRE FIGHTING MEASURES

Nonflammable solid.

When heated to decomposition, may emit toxic fumes.

In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA Code
None
established

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Wipe up, place in sealed bag or container and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

SECTION 7 – HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Organic #9. Store with dyes, indicators and stains.
Keep container tightly closed. Store in a cool, dry place. Use only in a hood or in a well ventilated area.

SECTION 8 – EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264). Use only in a hood or in a well ventilated area.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Pale yellow powder. Odorless.

Soluble: Alcohol, alkalis, and ether. Insoluble in water.

Melting point: 262.5 °C

Specific gravity: 1.277

pH indicator: 8.2 colorless to 10 pink.

SECTION 10 – STABILITY AND REACTIVITY

Avoid contact with strong oxidizers.

Shelf life: Indefinite, if stored properly.

SECTION 11 – TOXICOLOGICAL INFORMATION

Acute effects: Irritant, laxative, nausea, vomiting, gastritis

Chronic effects: Possible carcinogen (IARC-2B, NTP-R)

Target organs: G.I. tract

ORL-MAN TLD₀: 29 mg/kg

IHL-RAT LC₅₀: N.A.

SKN-RBT LD₅₀: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 – ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 – DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.

Flinn Suggested Disposal Method #26a is one option.

SECTION 14 – TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 – REGULATORY INFORMATION

TSCA-listed, EINECS-listed (201-004-7).

SECTION 16 – OTHER INFORMATION

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Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: March 21, 2014

FLINN SCIENTIFIC, INC.

Safety Data Sheet (SDS)

SDS #: 326.00

Revision Date: March 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

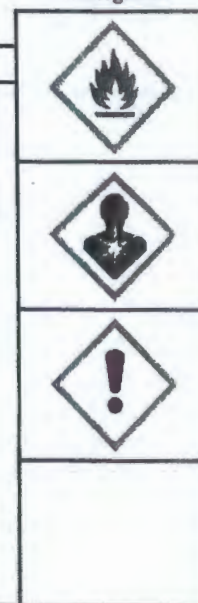
Ethyl Alcohol, Denatured

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CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **DANGER**

Pictograms



SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Flammable liquids (Category 2). Highly flammable liquid and vapor (H225). Keep away from heat, sparks, open flames, and hot surfaces. No smoking (P210).

Hazard class: Acute toxicity, oral (Category 4). Harmful if swallowed (H302). Do not eat, drink or smoke when using this product (P270).

Hazard class: Skin and serious eye damage, corrosion or irritation (Category 2, 2A). Causes skin and serious eye irritation (H315+H319).

Hazard class: Specific target organ toxicity, single exposure; respiratory tract irritation (Category 3). May cause respiratory irritation (H335). Avoid breathing mist, vapors or spray (P261).

Hazard class: Specific target organ toxicity, single exposure (Category 1). Causes damage to organs (H370). Addition of denaturant makes the product poisonous. Cannot be made nonpoisonous.

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Ethyl alcohol	64-17-5	C ₂ H ₅ OH	46.07	80-86%
Isopropyl alcohol	67-63-0	C ₃ H ₈ O	60.10	9%
Methyl alcohol	67-56-1	CH ₃ OH	32.04	4-5%
Methyl isobutyl ketone	108-10-1	C ₆ H ₁₂ O	100.16	1%
Water	7732-18-5	H ₂ O	18.00	5%
Synonym: Ethanol				

SECTION 4 — FIRST AID MEASURES

If exposed or concerned: Call a POISON CENTER or physician (P307+P311).

If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing (P304+P340). **If in eyes:** Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338). **If eye irritation persists:** Get medical advice or attention (P337+P313). **If on skin (or hair):** Immediately remove all contaminated clothing. Rinse skin with water (P303+P361+P353).

If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell (P302+P301+P312).

SECTION 5 — FIRE FIGHTING MEASURES

Class IB flammable liquid due to ethyl alcohol content.

Flash point: 21 °C

When heated, releases flammable fumes.

In case of fire: Use a tri-class dry chemical fire extinguisher (P370+P378).

NFPA CODE

H-2

F-3

R-0

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Remove all ignition sources and ventilate area. Contain the spill with sand or other inert absorbent material and deposit in a sealed bag or container. See Sections 8 and 13 for further information.

SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Organic #2. Store with alcohols, glycols, amines and amides. Store in a dedicated flammables cabinet. If a flammables cabinet is not available, store in Flinn Saf-Stor™ can.

Keep container tightly closed and cool (P233+P235). Use explosion-proof electrical and ventilating equipment (P241). Take precautionary measures against static discharge (P243).

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264). Use only in a hood or well-ventilated area (P271).

Exposure guidelines: (as ethyl alcohol) PEL 1000 ppm (OSHA), Ceiling 1000 ppm (ACGIH)

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Clear liquid. Strong alcohol odor.

Soluble: Miscible with water and many organic solvents.

Boiling point: 78 °C

Melting point: -144 °C

Specific gravity: 0.7893

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with oxidizing agents, peroxides, acids, acid chlorides, acid anhydrides, alkali metals, ammonia, moisture, heat, open flame, or any source of ignition.

Shelf life: Excellent, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Eye irritation, nausea, dizziness, headache.

Chronic effects: Liver damage, reproductive, teratogenic effects, carcinogen.

Target organs: Eyes, skin, central nervous system, liver, reproductive system.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

ORL-RAT LD₅₀: 7060 mg/kg (as ethyl alcohol)

IHL-RAT LC₅₀: 20,000 ppm/10H (as ethyl alcohol)

SKN-RBT LD₅₀: N.A.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.

Flinn Suggested Disposal Method #26b is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Ethyl alcohol solution. Hazard class: 3, Flammable liquid. UN number: UN1170.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (200-578-6), RCRA code D001.

SECTION 16 — OTHER INFORMATION

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Revision Date: March 21, 2014

FLINN SCIENTIFIC, INC.

Safety Data Sheet (SDS)

SDS #: 734.00

Revision Date: March 25, 2014

SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Sodium Hydroxide

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **DANGER**

Pictograms



SECTION 2 – HAZARDS IDENTIFICATION

Hazard class: Skin corrosion or irritation (Category 1). Causes severe skin burns and eye damage (H314). Do not breathe mist, vapors or spray (P260).

Hazard class: Corrosive to metals (Category 1). May be corrosive to metals (H290).

SECTION 3 – COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Sodium hydroxide	1310-73-2	NaOH	39.997	

SECTION 4 – FIRST AID MEASURES

Immediately call a POISON CENTER or physician (P310).

If inhaled: Remove victim to fresh air in a position comfortable for breathing (P304+P340).

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338). **If on skin (or hair):** Immediately remove all contaminated clothing. Rinse skin with water (P303+P361+P353). Wash contaminated clothing before reuse (P363).

If swallowed: Rinse mouth. Do NOT induce vomiting (P301+P330+P331).

SECTION 5 – FIRE FIGHTING MEASURES

Noncombustible solid.

Hot molten sodium hydroxide can react violently with water. Contact with aluminum, tin, and zinc liberates hydrogen gas. When heated to decomposition, may emit toxic fumes.

In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE

H-3

F-0

R-1

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Sweep up, place in sealed bag or container and dispose. Ventilate area and wash spill site after material pickup is complete. Absorb spills to prevent material damage (P390). See Sections 8 and 13 for further information.

SECTION 7 – HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #4. Store with hydroxides, oxides, silicates and carbonates. Absorbs CO₂ and water from air. Keep container tightly closed. Keep only in original container (P234).

SECTION 8 – EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264). Exposure guidelines: PEL 2 mg/m³ (OSHA); Ceiling 2 mg/m³ (ACGIH); IDLH 10 mg/m³

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

White pellets or flakes. Absorbs CO₂ and water from air.
Odorless.
Soluble: Water and alcohol

Boiling point: 1388 °C
Melting point: 323 °C
pH: basic
Specific gravity: 2.13

SECTION 10 – STABILITY AND REACTIVITY

Contact with aluminum, tin, and zinc liberates, hydrogen gas. Avoid contact with strong oxidizers, strong acids, organic material, chlorinated solvents.

Shelf life: Good, if kept tightly closed. See Section 7 for further information.

SECTION 11 – TOXICOLOGICAL INFORMATION

Acute effects: Eye and skin burns. Mucous membrane irritant.
pneumonitis.
Chronic effects: N.A.
Target organs: Eyes, skin, respiratory system.

ORL-RBT LD₅₀: 500 mg/kg
IHL-RAT LC₅₀: N.A.
SKN-RBT LD₅₀: 50 mg/24H

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 – ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 – DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #10 is one option.

SECTION 14 – TRANSPORT INFORMATION

Shipping name: Sodium hydroxide, solid. Hazard class: 8, Corrosive. UN number: UN1823.

N/A = Not applicable

SECTION 15 – REGULATORY INFORMATION

TSCA-listed, EINECS-listed (215-185-5), RCRA code D002, D003.

SECTION 16 – OTHER INFORMATION

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Revision Date: March 25, 2014