

## Section 1 Identification

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**Innovating Science**<sup>®</sup> by Aldon Corporation  
 "cutting edge science for the classroom"

221 Rochester Street  
 Avon, NY 14414-9409  
 (585) 226-6177

**CHEMTREC 24 Hour Emergency**  
**Phone Number (800) 424-9300**  
 For laboratory and industrial use only.  
 Not for drug, food or household use.

**Product** AGAR  
**Synonyms** Gelose / Agar-Agar

## Section 2 Hazards identification

**This substance or mixture has not been classified as hazardous according to the Globally Harmonized System (GHS) of Classification and Labeling of Chemicals.**

**Signal word:** Not classified  
**Pictograms:** Not classified  
**Target organs:** None known

**GHS Classification:** Not classified

**GHS Label information:**  
**Hazard statement:** Not classified  
**Precautionary statement:** Not classified

**Supplemental information:**

Agar is a dried hydrophilic colloidal substance obtained from various species of algae and, as such, presents a low hazard for normal laboratory handling. Dust may cause skin and eye irritation. Use with adequate ventilation. Wash hands thoroughly after handling. Dust dispersed in air is capable of creating a dust explosion when exposed to an ignition source. Avoid dispersion of dust in air.

**Hazards not otherwise classified:**

Health hazards not otherwise classified (HHNOC) - Not Known  
 Physical hazards not otherwise classified (PHNOC) - Not Known

## Section 3 Composition / information on ingredients

Chemical Name	CAS #	%	EINECS
Agar	9002-18-0	100%	232-658-1

## Section 4 First aid measures

**INGESTION:** Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

**INHALATION:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**EYE CONTACT:** MAY CAUSE TRANSIENT IRRITATION. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

**SKIN ABSORPTION:** Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

## Section 5 Fire fighting measures

**Suitable Extinguishing Media:** Use any media suitable for extinguishing supporting fire

**Protective Actions for Fire-fighters:** In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

**Specific Hazards:** During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Dust dispersed in air is capable of creating a dust explosion when exposed to an ignition source. Avoid dispersion of dust in air.

## Section 6 Accidental release measures

**Personal Precautions:** Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

**Environmental Precautions:** Avoid runoff into storm sewers and ditches which lead to waterways.

**Containment and Cleanup:** Sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

**Precautions for Safe Handling:** Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale dusts. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

**Conditions for Safe Storage:** Store in a cool, dry, well-ventilated area away from incompatible substances. Keep away from ignition sources.

## Section 8 Exposure controls / personal protection

Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)
	Agar	None established	None established	None established

**Engineering controls:** Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

**Respiratory protection:** None should be needed in normal laboratory handling at room temperatures. If dusty conditions prevail, work in fume hood or wear a NIOSH/MSHA-approved respirator.

## Section 9 Physical and chemical properties

**Appearance:** Solid, tan powder.  
**Odor:** Characteristic bland odor  
**Odor threshold:** Data not available.  
**pH:** Data not available.  
**Melting / Freezing point:** Decomposes  
**Boiling point:** Decomposes  
**Flash point:** Data not available

**Evaporation rate ( = 1):** Data not available  
**Flammability (solid/gas):** Data not available.  
**Explosion limits: Lower / Upper:** Data not available  
**Vapor pressure (mm Hg):** Negligible  
**Vapor density (Air = 1):** Data not available  
**Relative density (Specific gravity):** >1.0  
**Solubility(ies):** Soluble in boiling water. Insoluble in cold water.

**Partition coefficient:** Data not available  
**Auto-ignition temperature:** Data not available  
**Decomposition temperature:** Data not available.  
**Viscosity:** Data not available.  
**Molecular formula:** (C<sub>12</sub>H<sub>18</sub>O<sub>9</sub>)<sub>x</sub>  
**Molecular weight:** 3000-9000

## Section 10 Stability and reactivity

**Chemical stability:** Stable  
**Hazardous polymerization:** Will not occur.  
**Conditions to avoid:** Excessive temperatures, heat, sparks, open flame and other sources of ignition.  
**Incompatible materials:** Strong oxidizers, alkalis.  
**Hazardous decomposition products:** Carbon oxides.

## Section 11 Toxicological information

**Acute toxicity:** Oral-rat LD50: 1100 mg/kg [Agar CAS # 9002-18-0]

**Skin corrosion/irritation:** Data not available

**Serious eye damage/irritation:** Data not available

**Respiratory or skin sensitization:** Data not available

**Germ cell mutagenicity:** Data not available

**Carcinogenicity:** Data not available

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**Reproductive toxicity:** Data not available

**STOT-single exposure:** Data not available

**STOT-repeated exposure:** Data not available

**Aspiration hazard:** Data not available

**Potential health effects:**

Inhalation: No specific hazard known.

Ingestion: No specific hazard known.

Skin: No specific hazard known.

Eyes: Contact with eyes may cause irritation.

**Signs and symptoms of exposure:** To the best of our knowledge the chemical, physical and toxicological properties have not been thoroughly investigated. Specific data is not available. Exercise appropriate procedures to minimize potential hazards.

**Additional information:** RTECS #: AW7950000 [Agar]

## Section 12 Ecological information

**Toxicity to fish:** No data available

**Toxicity to daphnia and other aquatic invertebrates:** No data available

**Toxicity to algae:** No data available

**Persistence and degradability:** No data available

**Bioaccumulative potential:** No data available

**Mobility in soil:** No data available

**PBT and vPvB assessment:** No data available

**Other adverse effects:** An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

## Section 13 Disposal considerations

These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.

## Section 14 Transport information

**UN/NA number:** Not applicable

**Shipping name:** Not Regulated

**Hazard class:** Not applicable

**Packing group:** Not applicable

**Reportable Quantity:** No

**Marine pollutant:** No

**Exceptions:** Not applicable

**2016 ERG Guide #** Not applicable

## Section 15 Regulatory information

A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list.

Component	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL	CA Prop 65
Agar	Listed	Not listed	Not listed	Listed	Not listed	This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity.

## Section 16 Other information

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook.

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**Product** BROMOTHYMOL BLUE CONCENTRATE

**Synonyms** Bromothymol Blue, Concentrated Solution

## Section 2 Hazards identification

**Signal word:** DANGER

**Pictograms:** GHS05

**Target organs:** Respiratory tract, gastrointestinal tract, eyes, skin.



**GHS Classification:**

Skin, Corr. (Category 1A)

Serious Eye Damage/ Eye Irritation (Category 1)

**GHS Label information: Hazard statement:**

H314: Causes severe skin burns and eye damage.

**Precautionary statement:**

P260: Do not breathe mist/vapours/spray.

P264: Wash hands thoroughly after handling.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P305+P351+P338: IF IN EYES: Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303+P361+P353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304+P340: IF INHALED: Remove person to fresh air and keep in a position comfortable for breathing.

P310: Immediately call a POISON CENTER or doctor/physician.

P363: Wash contaminated clothing before reuse.

P405: Store locked up.

P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.

**Hazards not otherwise classified:**

Health hazards not otherwise classified (HHNOC) - Not Known

Physical hazards not otherwise classified (PHNOC) - Not Known

## Section 3 Composition / information on ingredients

Chemical Name	CAS #	%	EINECS
Water	7732-18-5	91%	231-791-2
Sodium hydroxide	1310-73-2	8%	215-185-5
Bromothymol blue, sodium salt	34722-90-2	1%	252-169-7

## Section 4 First aid measures

**INGESTION:** MAY BE FATAL IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

**INHALATION:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**EYE CONTACT:** CAUSES SEVERE DAMAGE. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

**SKIN ABSORPTION:** CAUSES SEVERE BURNS. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

## Section 5 Fire fighting measures

**Suitable Extinguishing Media:** Dry chemical, water spray, alcohol foam. Can react with carbon dioxide to form sodium carbonate.

**Protective Actions for Fire-fighters:** In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

**Specific Hazards:** In fire conditions, water may evaporate from this solution which may cause hazardous decomposition products to be formed as dust or fume. Contact with metals can generate hydrogen gas.

## Section 6 Accidental release measures

**Personal Precautions:** Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

**Environmental Precautions:** Avoid runoff into storm sewers and ditches which lead to waterways.

**Containment and Cleanup:** Absorb with inert dry material, sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.



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<b>Product</b>	HYDROCHLORIC ACID, 2 MOLAR (2 NORMAL) SOLUTION
<b>Synonyms</b>	Muriatic Acid, Water Solution ; Hydrogen Chloride, Water Solution

## Section 2 Hazards identification

**Signal word:** WARNING

**Pictograms:** GHS05

**Target organs:** Respiratory system, skin, eyes, lungs.

**GHS Classification:**

Corrosive to metals (Category 1)

Skin irritant (Category 3)

Eye irritant (Category 2B)

**GHS Label information:****Hazard statement(s):**

H290: May be corrosive to metals.

H316: Causes mild skin irritation.

H320: Causes eye irritation.

**Precautionary statement(s):**

P234: Keep only in original container.

P264: Wash hands thoroughly after handling.

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

P332+P313: If skin irritation occurs: Get medical attention.

P337+P313: If eye irritation persists: Get medical attention.

P390: Absorb spillage to prevent material damage.

P406: Store in corrosive resistant container with a resistant inner liner.

**Hazards not otherwise classified:**

Health hazards not otherwise classified (HHNOC) - Not Known

Physical hazards not otherwise classified (PHNOC) - Not Known

## Section 3 Composition / information on ingredients

Chemical Name	CAS #	%	EINECS
Water	7732-18-5	93.72%	231-791-2
Hydrochloric acid	7647-01-0	6.28%	231-595-7

## Section 4 First aid measures

**INGESTION:** MAY BE HARMFUL IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

**INHALATION:** MAY BE HARMFUL IF INHALED. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**EYE CONTACT:** MAY CAUSE IRRITATION. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

**SKIN ABSORPTION:** MAY CAUSE IRRITATION. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

## Section 5 Fire fighting measures

**Suitable Extinguishing Media:** Carbon dioxide, dry chemical, dry sand, alcohol foam.

**Protective Actions for Fire-fighters:** In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

**Specific Hazards:** During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Contact with metals produce hydrogen, which is flammable and may produce explosive mixtures with air.

## Section 6 Accidental release measures

**Personal Precautions:** Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

**Environmental Precautions:** Avoid runoff into storm sewers and ditches which lead to waterways.

**Containment and Cleanup:** Neutralize spill with sodium bicarbonate or calcium hydroxide, absorb with inert dry material, sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

**Precautions for Safe Handling:** Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale vapors, spray or mist. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

**Conditions for Safe Storage:** Store in a cool, dry, well-ventilated area away from incompatible substances.

## Section 8 Exposure controls / personal protection

Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)
	Hydrogen chloride	STEL: C 2 ppm / C 2.98 mg/m <sup>3</sup>	STEL: C 5 ppm / C 7 mg/m <sup>3</sup>	STEL: C 5 ppm / C 7 mg/m <sup>3</sup>

**Engineering controls:** Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

**Respiratory protection:** None should be needed in normal laboratory handling at room temperatures. If misty conditions prevail, work in fume hood or wear a NIOSH/MSHA-approved respirator.

## Section 9 Physical and chemical properties

<b>Appearance:</b> Clear, colorless liquid. <b>Odor:</b> Pungent odor. <b>Odor threshold:</b> Data not available. <b>pH:</b> N/A <b>Melting / Freezing point:</b> Approx. 0°C (32°F) [water] <b>Boiling point:</b> Approx. 100°C (212°F) [water] <b>Flash point:</b> Not flammable.	<b>Evaporation rate ( = 1):</b> Data not available. <b>Flammability (solid/gas):</b> Data not available. <b>Explosion limits: Upper/Lower:</b> Data not available. <b>Vapor pressure (mm Hg):</b> 14 [water] <b>Vapor density (Air = 1):</b> 0.7 [water] <b>Relative density (Specific gravity):</b> 1.0 [water] <b>Solubility(ies):</b> Soluble in water.	<b>Partition coefficient: (n-octanol / water):</b> Data not available. <b>Auto-ignition temperature:</b> Data not available. <b>Decomposition temperature:</b> Data not available. <b>Viscosity:</b> Data not available. <b>Molecular formula:</b> Mixture <b>Molecular weight:</b> Mixture
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## Section 10 Stability and reactivity

**Chemical stability:** Stable **Hazardous polymerization:** Will not occur.

**Conditions to avoid:** Containers may burst when heated. Avoid contact with water.

**Incompatible materials:** Metals, bases, active metals, alkali metals, oxidizing agents, hydroxides, amines, carbonates, cyanides, sulfides, sulfites, formaldehyde.

**Hazardous decomposition products:** Hydrogen chloride gas.

## Section 11 Toxicological information

**Acute toxicity:** Data not available

**Skin corrosion/irritation:** Data not available at this dilution.

**Serious eye damage/irritation:** Data not available at this dilution.

**Respiratory or skin sensitization:** Data not available

**Germ cell mutagenicity:** Data not available

**Carcinogenicity:** Data not available

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by NTP.

IARC: Group 3: Not classifiable as to its carcinogenicity to humans.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**Reproductive toxicity:** Data not available

**STOT-single exposure:** Data not available at this dilution.

**STOT-repeated exposure:** Data not available

**Aspiration hazard:** Data not available

**Potential health effects:** To the best of our knowledge the chemical, physical and toxicological properties have not been thoroughly investigated. Specific data is not available. Exercise appropriate procedures to minimize potential hazards.

**Inhalation:** May be harmful if inhaled. Material may cause irritation to the tissue of the mucous membranes and upper respiratory tract.

**Ingestion:** May be harmful if swallowed.

**Skin:** May cause irritation and/or burns.

**Eyes:** May cause irritation and/or burns.

**Signs and symptoms of exposure:** Data not available at this dilution.

**Additional information:** RTECS #: MW4025000 [Hydrochloric acid]

## Section 12 Ecological information

**Toxicity to fish:** LC50 - Gambusia affinis (Mosquito fish) - 282 mg/l - 96 h (Hydrochloric acid)

**Toxicity to daphnia and other aquatic invertebrates:** No data available

**Toxicity to algae:** No data available

**Persistence and degradability:** No data available

**Bioaccumulative potential:** No data available

**Mobility in soil:** No data available

**PBT and vPvB assessment:** No data available

**Other adverse effects:** An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

## Section 13 Disposal considerations

These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.

## Section 14 Transport information

**UN/NA number:** UN1789

**Shipping name:** Hydrochloric acid

**Hazard class:** 8

**Packing group:** III

**Exceptions:** Limited quantity equal to or less than 5 Lt

**Reportable Quantity:** 5000 lbs (2270 kg)

**Marine pollutant:** No

**2016 ERG Guide #** 157

## Section 15 Regulatory information

A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list.

Component	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL	CA Prop 65
Hydrochloric acid	Listed	Not listed	D002	Listed	Not listed	This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity.

## Section 16 Other information

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook.