

Safety Data Sheet

according to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

Revision: April 26, 2021

1 Identification

- **Product identifier**
- **Trade name:** Hardness2 Soln,500mL
- **Product code:** MO425SS
- **Recommended use and restriction on use**
- **Recommended use:** Laboratory chemicals
- **Restrictions on use:** No relevant information available.
- **Details of the supplier of the Safety Data Sheet**
- **Manufacturer/Supplier:**
AquaPhoenix Scientific, Inc.
860 Gitts Run Road
Hanover, PA 17331 USA
Tel +1 (717)632-1291
Toll-Free: (866)632-1291
info@aquaphoenixsci.com
- **Distributor:**
AquaPhoenix Scientific
860 Gitts Run Road,
Hanover, PA 17331
(717) 632-1291
- **Emergency telephone number:**
ChemTel Inc.
(800)255-3924 (North America)
+1 (813)248-0585 (International)

2 Hazard(s) identification

- **Classification of the substance or mixture**
- Eye Irrit. 2A H319 Causes serious eye irritation.
- Skin Sens. 1 H317 May cause an allergic skin reaction.
- Carc. 2 H351 Suspected of causing cancer.
- STOT RE 2 H373 May cause damage to the spleen and the blood through prolonged or repeated exposure.

· Label elements

· GHS label elements

The product is classified and labeled according to the Globally Harmonized System (GHS).

· Hazard pictograms:



GHS07 GHS08

· Signal word: Warning

· Hazard statements:

H319 Causes serious eye irritation.

H317 May cause an allergic skin reaction.

H351 Suspected of causing cancer.

H373 May cause damage to the spleen and the blood through prolonged or repeated exposure.

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· **Precautionary statements:**

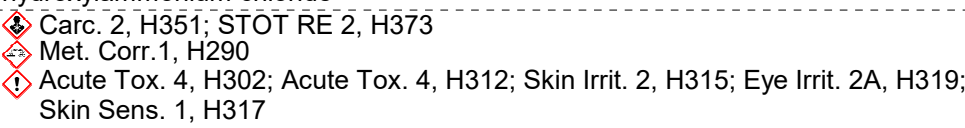
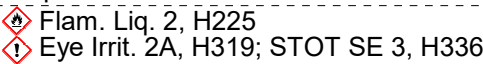
- P201 Obtain special instructions before use.
 P202 Do not handle until all safety precautions have been read and understood.
 P260 Do not breathe mist/vapors/spray.
 P264 Wash thoroughly after handling.
 P272 Contaminated work clothing must not be allowed out of the workplace.
 P280 Wear protective gloves and eye protection.
 P302+P352 If on skin: Wash with plenty of soap and water.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P314 Get medical advice/attention if you feel unwell.
 P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
 P337+P313 If eye irritation persists: Get medical advice/attention.
 P363 Wash contaminated clothing before reuse.
 P405 Store locked up.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Other hazards** There are no other hazards not otherwise classified that have been identified.

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

· **Components:**

57-55-6	Propylene glycol	90-100%
5470-11-1	hydroxylammonium chloride 	1-5%
67-63-0	Propan-2-ol 	1-5%
3147-14-6	3-hydroxy-4-(6-hydroxy-m-tolylazo)naphthalene-1-sulphonic acid	<1%

· **Additional information:**

For the listed ingredient(s), the identity and/or exact percentage(s) are being withheld as a trade secret.
 For the wording of the listed Hazard Statements, refer to section 16.

4 First-aid measures

· **Description of first aid measures**

· **General information:**

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

· **After inhalation:**

Supply fresh air.

Provide oxygen treatment if affected person has difficulty breathing.

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If experiencing respiratory symptoms: Call a poison center/doctor.

· **After skin contact:**

Immediately rinse with water.

If skin irritation or rash occurs: Get medical advice/attention.

Seek immediate help for blistering or open wounds.

· **After eye contact:**

Protect unharmed eye.

Remove contact lenses if worn.

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

· **After swallowing:**

Rinse out mouth and then drink plenty of water.

Do not induce vomiting; immediately call for medical help.

· **Most important symptoms and effects, both acute and delayed:**

Allergic reactions

Coughing

Causes serious eye irritation.

Gastric or intestinal disorders when ingested.

Nausea in case of ingestion.

Dizziness

Cramp

· **Danger:**

Sensitizing effect by skin contact is possible with prolonged exposure.

Suspected of causing cancer.

May cause damage to the spleen and the blood through prolonged or repeated exposure.

· **Indication of any immediate medical attention and special treatment needed:**

Medical supervision for at least 48 hours.

Treat skin and mucous membrane with antihistamine and corticoid preparations.

Contains hydroxylammonium chloride. May produce an allergic reaction.

If necessary oxygen respiration treatment.

If medical advice is needed, have product container or label at hand.

5 Fire-fighting measures

· **Extinguishing media**

· **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.

· **For safety reasons unsuitable extinguishing agents:** No relevant information available.

· **Special hazards arising from the substance or mixture**

Formation of toxic gases is possible during heating or in case of fire.

· **Advice for firefighters**

· **Protective equipment:**

Wear self-contained respiratory protective device.

Wear fully protective suit.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**

Isolate area and prevent access.

Ensure adequate ventilation.

For large spills, use respiratory protective device against the effects of fumes/dust/aerosol.

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Wear protective equipment. Keep unprotected persons away.

- **Environmental precautions**

Do not allow to enter sewers/ surface or ground water.

Inform respective authorities in case of seepage into water course or sewage system.

- **Methods and material for containment and cleaning up**

Wipe up small spills with paper towel and discard.

For larger spills, add sawdust, chalk or other inert binding material, then sweep up and discard.

Send for recovery or disposal in suitable receptacles.

- **Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage

- **Handling**

- **Precautions for safe handling:**

Prevent formation of aerosols.

Avoid splashes or spray in enclosed areas.

Use only in well ventilated areas.

- **Information about protection against explosions and fires:** No special measures required.

- **Conditions for safe storage, including any incompatibilities**

- **Requirements to be met by storerooms and receptacles:**

Unsuitable material for receptacle: steel.

Avoid storage near extreme heat.

- **Information about storage in one common storage facility:**

Store away from foodstuffs.

Do not store together with acids.

Store away from oxidizing agents.

- **Further information about storage conditions:**

Keep containers tightly sealed.

Store in cool, dry conditions in well sealed receptacles.

- **Specific end use(s)** No relevant information available.

8 Exposure controls/personal protection

- **Control parameters**

- **Components with limit values that require monitoring at the workplace:**

57-55-6 Propylene glycol

WEEL (USA)	Long-term value: 10 mg/m ³
EV (Canada)	Long-term value: 155* 10** mg/m ³ , 50* ppm *vapour and aerosol;**aerosol only
67-63-0 Propan-2-ol	
PEL (USA)	Long-term value: 980 mg/m ³ , 400 ppm
REL (USA)	Short-term value: 1225 mg/m ³ , 500 ppm Long-term value: 980 mg/m ³ , 400 ppm

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TLV (USA)	Short-term value: 984 mg/m ³ , 400 ppm Long-term value: 492 mg/m ³ , 200 ppm BEI
EL (Canada)	Short-term value: 400 ppm Long-term value: 200 ppm
EV (Canada)	Short-term value: 400 ppm Long-term value: 200 ppm
LMPE (Mexico)	Short-term value: 400 ppm Long-term value: 200 ppm A4, IBE

· **Ingredients with biological limit values:**

67-63-0 Propan-2-ol

BEI (USA)	40 mg/L Medium: urine Time: end of shift at end of workweek Parameter: Acetone (background, nonspecific)
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· **Exposure controls**

· **General protective and hygienic measures:**

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of work.

Do not inhale gases / fumes / aerosols.

Avoid contact with the eyes and skin.

· **Engineering controls:** Provide adequate ventilation.

· **Breathing equipment:** Use suitable respiratory protective device when high concentrations are present.

· **Protection of hands:**



Protective gloves

· **Material of gloves**

PVA gloves

Fluorocarbon rubber (Viton)

· **Not suitable are gloves made of the following materials:**

Only glove materials listed above should be used.

· **Eye protection:**



Safety glasses

Follow relevant national guidelines concerning the use of protective eyewear.

· **Body protection:** Protective work clothing

· **Limitation and supervision of exposure into the environment**

No relevant information available.

9 Physical and chemical properties

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Information on basic physical and chemical properties

Appearance:

Form: Liquid

Color: Dark red

Odor: Fruit-like

Odor threshold: Not determined.

pH-value: Not determined.

Melting point/Melting range: Not determined.

Boiling point/Boiling range: Not determined.

Flash point: 104 °C (219.2 °F)
The product is not flammable.

Flammability (solid, gaseous): Not applicable.

Auto-ignition temperature: >260 °C (>500 °F)

Decomposition temperature: Not determined.

Danger of explosion: Product does not present an explosion hazard.

Explosion limits

Lower: Not determined.

Upper: Not determined.

Oxidizing properties: Non-oxidizing.

Vapor pressure: Not determined.

Density:

Relative density: Not determined.

Vapor density: Not determined.

Evaporation rate: Not determined.

Solubility in / Miscibility with

Water: Soluble.

Partition coefficient (n-octanol/water): Not determined.

Viscosity

Dynamic: Not determined.

Kinematic: Not determined.

Other information: No relevant information available.

10 Stability and reactivity

Reactivity: No relevant information available.

Chemical stability: Stable under normal temperatures and pressures.

Thermal decomposition / conditions to be avoided:

No decomposition if used and stored according to specifications.

Possibility of hazardous reactions

Toxic fumes may be released if heated above the decomposition point.

Reacts with strong oxidizing agents.

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- Reacts with strong acids.
- **Conditions to avoid** No relevant information available.
- **Incompatible materials**
 - Metals.
 - Acids.
 - Oxidizers
- **Hazardous decomposition products**
 - Sulfur oxides (SOx)
 - Chlorine compounds

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:** Based on available data, the classification criteria are not met.

· LD/LC50 values that are relevant for classification:

5470-11-1 hydroxylammonium chloride

Oral | LD50 | 408 mg/kg (mouse)

- **Primary irritant effect:** Irritant effects based on derogation with similar mixtures.
- **On the skin:** Based on available data, the classification criteria are not met.
- **On the eye:** Causes eye irritation.
- **Sensitization:** Sensitization possible through skin contact.

· IARC (International Agency for Research on Cancer):

67-63-0 | Propan-2-ol

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· NTP (National Toxicology Program):

None of the ingredients are listed.

· OSHA-Ca (Occupational Safety & Health Administration):

None of the ingredients are listed.

· Probable route(s) of exposure:

Ingestion.
Inhalation.
Eye contact.
Skin contact.

- **Acute effects (acute toxicity, irritation and corrosivity):** Causes serious eye irritation.
- **Repeated dose toxicity:**
 - Sensitizing effect by skin contact is possible with prolonged exposure.
 - Possible risk of irreversible effects.
- **Germ cell mutagenicity:** Based on available data, the classification criteria are not met.
- **Carcinogenicity:** Suspected of causing cancer.
- **Reproductive toxicity:** Based on available data, the classification criteria are not met.
- **STOT-single exposure:** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure:**
 - May cause damage to the spleen and the blood through prolonged or repeated exposure.
- **Aspiration hazard:** Based on available data, the classification criteria are not met.

12 Ecological information

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- **Toxicity**
- **Aquatic toxicity** No relevant information available.
- **Persistence and degradability** No relevant information available.
- **Bioaccumulative potential:** No relevant information available.
- **Mobility in soil:** No relevant information available.
- **Additional ecological information**
- **General notes:**
Do not allow product to reach ground water, water course or sewage system, even in small quantities.
Danger to drinking water if even extremely small quantities leak into the ground.
- **Other adverse effects** No relevant information available.

13 Disposal considerations

- **Uncleaned packagings**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

- | | |
|--|-----------------|
| · UN-Number | |
| · DOT, ADR/RID/ADN, IMDG, IATA | Not regulated. |
| · UN proper shipping name | |
| · DOT, ADR/RID/ADN, IMDG, IATA | Not regulated. |
| · Transport hazard class(es) | |
| · DOT, ADR/RID/ADN, IMDG, IATA | |
| · Class | Not regulated. |
| · Packing group | |
| · DOT, ADR/RID/ADN, IMDG, IATA | Not regulated. |
| · Environmental hazards | Not applicable. |
| · Special precautions for user | Not applicable. |
| · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **United States (USA)**
- **SARA**
- **Section 302 (extremely hazardous substances):**

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None of the ingredients are listed.

· **Section 313 (Specific toxic chemical listings):**

67-63-0 | Propan-2-ol

· **TSCA (Toxic Substances Control Act)**

All ingredients are listed or exempt.

· **Proposition 65 (California)**

· **Chemicals known to cause cancer:**

None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity for females:**

None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity for males:**

None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients are listed.

· **EPA (Environmental Protection Agency):**

None of the ingredients are listed.

· **IARC (International Agency for Research on Cancer):**

67-63-0 | Propan-2-ol

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· **Canadian Domestic Substances List (DSL):**

None of the ingredients are listed.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Abbreviations and acronyms:**

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

OSHA: Occupational Safety & Health Administration

Flam. Liq. 2: Flammable liquids – Category 2

Met. Corr. 1: Corrosive to metals – Category 1

Acute Tox. 4: Acute toxicity – Category 4

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A

Skin Sens. 1: Skin sensitisation – Category 1

Carc. 2: Carcinogenicity – Category 2

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

· **Sources**

Website, European Chemicals Agency (echa.europa.eu)

Website, US EPA Substance Registry Services (ofmpub.epa.gov/sor-internet/registry/substreg/home/overview/home.do)

Website, Chemical Abstracts Registry, American Chemical Society (www.cas.org)

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Patty's Industrial Hygiene, 6th ed., Rose, Vernon, ed. ISBN: 978-0-470-07488-6

Casarett and Doull's Toxicology: The Basic Science of Poisons, 8th Ed., Klaasen, Curtis D., ed., ISBN: 978-0-07-176923-5.

Safety Data Sheets, Individual Manufacturers