

# Safety Data Sheet

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

Revision: October 16, 2019

## 1 Identification

- **Product identifier**
- **Trade name:** Hardness Reagent
- **Product code:** AR-1004-60 EW
- **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  
Phone: (717)632-1291  
Toll-Free: (866)632-1291  
info@aquaphoenixsci.com
- **Distributor:**  
Aqua Analytics  
39555 Orchard Hill Place, Suite 600  
Novi, MI 48375  
(888) 712-4000
- **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**  
Skin Irrit. 2 H315 Causes skin irritation.  
Eye Irrit. 2A H319 Causes serious eye irritation.  
STOT RE 2 H373 May cause damage to the respiratory tract through prolonged or repeated exposure.  
Route of exposure: Inhalation.

- **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:**  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
H373 May cause damage to the respiratory tract through prolonged or repeated exposure. Route of exposure: Inhalation.
- **Precautionary statements:**

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P260	Do not breathe mist/vapors/spray.
P264	Wash thoroughly after handling.
P280	Wear protective gloves/protective clothing/eye protection.
P302+P352	If on skin: Wash with plenty of 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.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.
P337+P313	If eye irritation persists: Get medical advice/attention.
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:**

7732-18-5	Water	>80%
139-33-3	Disodium dihydrogenethylenediaminetetraacetate  STOT RE 2, H373  Acute Tox. 4, H332	<10%
1310-73-2	Sodium hydroxide  Met. Corr. 1, H290; Skin Corr. 1A, H314; Eye Dam. 1, H318	<2%
7791-18-6	Magnesium chloride hexahydrate	<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**

· **After inhalation:** Supply fresh air; consult doctor in case of complaints.

· **After skin contact:**

Immediately rinse with water.

If skin irritation continues, consult a doctor.

· **After eye contact:**

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:**

Irritating to eyes and skin.

Gastric or intestinal disorders when ingested.

· **Danger:**

May cause damage to the respiratory tract through prolonged or repeated exposure. Route of exposure:

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Inhalation.

- **Indication of any immediate medical attention and special treatment needed:**  
Medical supervision for at least 48 hours.

## 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**  
The product is not flammable.  
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**  
Wear protective clothing.  
For large spills, use respiratory protective device against the effects of fumes/dust/aerosol.  
Ensure adequate ventilation.
- **Environmental precautions**  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **Methods and material for containment and cleaning up**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
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:**  
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:** Store only in the original receptacle.
- **Information about storage in one common storage facility:**  
Do not store together with oxidizing and acidic materials.

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Store away from foodstuffs.

- **Further information about storage conditions:** Keep containers tightly sealed.
- **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:**

The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.

### 1310-73-2 Sodium hydroxide

PEL (USA)	Long-term value: 2 mg/m <sup>3</sup>
REL (USA)	Ceiling limit value: 2 mg/m <sup>3</sup>
TLV (USA)	Ceiling limit value: 2 mg/m <sup>3</sup>
EL (Canada)	Ceiling limit value: 2 mg/m <sup>3</sup>
EV (Canada)	Ceiling limit value: 2 mg/m <sup>3</sup>
LMPE (Mexico)	Ceiling limit value: 2 mg/m <sup>3</sup>

- **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.

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

- **Breathing equipment:**

Not required under normal conditions of use.

Use suitable respiratory protective device when aerosol or mist is formed.

- **Protection of hands:**



Protective gloves

- **Material of gloves**

Butyl rubber, BR  
Natural rubber, NR  
Neoprene gloves  
Nitrile rubber, NBR  
Fluorocarbon rubber (Viton)

- **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.

- **Risk management measures** No relevant information available.

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## 9 Physical and chemical properties

### · Information on basic physical and chemical properties

#### · Appearance:

Form: Liquid  
Color: Colorless

· Odor: Odorless

· Odor threshold: Not determined.

· pH-value at 20 °C (68 °F): 8-10

· Melting point/Melting range: Not determined.

· Boiling point/Boiling range: 100-105 °C (212-221 °F)

· Flash point: The product is not flammable.

· Flammability (solid, gaseous): Not applicable.

· Auto-ignition temperature: Not determined.

· 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: 1.01-1.05

Vapor density: Not determined.

Evaporation rate: Not determined.

#### · Solubility in / Miscibility with

Water: Fully miscible.

· 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

Contact with acids releases toxic gases.

Exothermic reaction with acids.

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Reacts with strong oxidizing agents.  
Toxic fumes may be released if heated above the decomposition point.

- **Conditions to avoid** No relevant information available.
- **Incompatible materials** No relevant information available.
- **Hazardous decomposition products**

Under fire conditions only:  
Nitrogen oxides  
Carbon monoxide and carbon dioxide  
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:**

**6381-92-6 edetic acid disodium salt**

Oral | LD50 | 2800 mg/kg (rat)

- **Primary irritant effect:**
- **On the skin:** Irritant to skin and mucous membranes.
- **On the eye:** Irritating effect.
- **Sensitization:** Based on available data, the classification criteria are not met.

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

None of the ingredients are listed.

- **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.

- **Germ cell mutagenicity:** Based on available data, the classification criteria are not met.
- **Carcinogenicity:** Based on available data, the classification criteria are not met.
- **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 respiratory tract through prolonged or repeated exposure. Route of exposure:  
Inhalation.
- **Aspiration hazard:** Based on available data, the classification criteria are not met.

## 12 Ecological information

- **Toxicity**
- **Aquatic toxicity** No relevant information available.

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- **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 undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **Other adverse effects** No relevant information available.

## 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**  
The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes.
- **Uncleaned packagings**
- **Recommendation:** Disposal must be made according to official regulations.

## 14 Transport information

- |  |                 |
|--|-----------------|
| · <b>UN-Number</b>   |                 |
| · DOT, ADR/RID/ADN, IMDG, IATA   | Not regulated.  |
| · <b>UN proper shipping name</b>   |                 |
| · DOT, ADR/RID/ADN, IMDG, IATA   | Not regulated.  |
| · <b>Transport hazard class(es)</b>  |                 |
| · DOT, ADR/RID/ADN, IMDG, IATA   |                 |
| · Class  | Not regulated.  |
| · <b>Packing group</b>   |                 |
| · DOT, ADR/RID/ADN, IMDG, IATA   | Not regulated.  |
| · <b>Environmental hazards</b>   |                 |
| · Marine pollutant:  | No              |
| · <b>Special precautions for user</b>  | Not applicable. |
| · <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b> | Not applicable. |

## 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **United States (USA)**

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· **SARA**

· **Section 302 (extremely hazardous substances):**

None of the ingredients are listed.

· **Section 355 (extremely hazardous substances):**

None of the ingredients are listed.

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

None of the ingredients are listed.

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

139-33-3	Disodium dihydrogenethylenediaminetetraacetate
7786-30-3	magnesium chloride
1310-73-2	Sodium hydroxide
7732-18-5	Water

· **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):**

None of the ingredients are listed.

· **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  
 Met. Corr. 1: Corrosive to metals – Category 1  
 Acute Tox. 4: Acute toxicity – Category 4  
 Skin Corr. 1A: Skin corrosion/irritation – Category 1A  
 Skin Irrit. 2: Skin corrosion/irritation – Category 2

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Eye Dam. 1: Serious eye damage/eye irritation – Category 1  
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A  
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

**Sources**

Website, European Chemicals Agency ([echa.europa.eu](http://echa.europa.eu))

Website, US EPA Substance Registry Services ([ofmpub.epa.gov/sorinternet/registry/substreg/home/overview/home.do](http://ofmpub.epa.gov/sorinternet/registry/substreg/home/overview/home.do))

Website, Chemical Abstracts Registry, American Chemical Society ([www.cas.org](http://www.cas.org))

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

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