

# SAFETY DATA SHEET

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# **1. IDENTIFICATION**

| <u>Product identifier</u><br>Product Name  | Oxidation-Reduction Potential Standard Light's Solution   |  |  |
|--|---|--|--|
| Other means of identification<br>Product Code(s)   | 2612520   |  |  |
| Safety data sheet number   | M01334  |  |  |
| UN/ID no   | UN3264  |  |  |
| <u>Recommended use of the chemical</u><br>Recommended Use<br>Uses advised against<br>Restrictions on use | <u>and restrictions on use</u><br>Determination of volatile acids. Water Analysis.<br>None.<br>For Research and Development Only. |  |  |
| Details of the supplier of the safety data sheet   |   |  |  |

Manufacturer Address Hach Company, P.O.Box 389, Loveland, CO 80539, USA, +1(970) 669-3050

### Emergency telephone number

+1(303) 623-5716 - 24 Hour Service

# 2. HAZARDS IDENTIFICATION

#### **Classification**

#### **Regulatory Status**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

| Corrosive to metals               | Category 1 |
|-----------------------------------|------------|
| Skin corrosion/irritation         | Category 1 |
| Serious eye damage/eye irritation | Category 1 |

### Hazards not otherwise classified (HNOC)

Not applicable

#### Label elements

Signal word Danger

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Hazard statements H290 - May be corrosive to metals H314 - Causes severe skin burns and eye damage

#### Precautionary statements

P260 - Do not breathe dust/fume/gas/mist/vapors/spray

P280 - Wear protective gloves, protective clothing, eye protection, and face protection

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 victim to fresh air and keep at rest in a position comfortable for breathing

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

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 an approved waste disposal plant

P234 - Keep only in original container

P390 - Absorb spillage to prevent material damage

Other Hazards Known

Toxic to aquatic life

# 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### Substance

Not applicable

#### **Mixture**

#### Percent ranges are used where confidential product information is applicable.

| Chemical name                            | CAS No    | Percent<br>Range | HMRIC # |
|--|-----------|------------------|---------|
| Sulfuric acid                            | 7664-93-9 | <10%             | -       |
| Iron(III) ammonium sulfate dodecahydrate | 7783-83-7 | 1 - 5%           | -       |

# 4. FIRST AID MEASURES

#### **Description of first aid measures**

General adviceShow this safety data sheet to the doctor in attendance. Immediate medical attention is<br/>required.InhalationRemove to fresh air. If breathing has stopped, give artificial respiration. Get medical<br/>attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the<br/>substance; give artificial respiration with the aid of a pocket mask equipped with a one-way<br/>valve or other proper respiratory medical device. If breathing is difficult, (trained personnel<br/>should) give oxygen. Delayed pulmonary edema may occur. Get immediate medical<br/>advice/attention.

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| Eye contact                           | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.<br>Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open<br>while rinsing. Do not rub affected area. Get immediate medical advice/attention.  |
| Skin contact                          | Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get immediate medical advice/attention.   |
| Ingestion                             | Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Get immediate medical advice/attention.   |
| Self-protection of the first aider    | Avoid contact with skin, eyes or clothing. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation.   |
| Most important symptoms and effe      | ects, both acute and delayed  |
| Symptoms                              | Burning sensation.  |
| Indication of any immediate medic     | al attention and special treatment needed   |
| Note to physicians                    | Product is a corrosive material. Use of gastric lavage or emesis is contraindicated.<br>Possible perforation of stomach or esophagus should be investigated. Do not give<br>chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood<br>pressure may occur with moist rales, frothy sputum, and high pulse pressure. |
|                                       | 5. FIRE-FIGHTING MEASURES   |
| Suitable Extinguishing Media          | Use extinguishing measures that are appropriate to local circumstances and the  |

| Suitable Extinguishing Media                      | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.                                |
|---|--|
| Unsuitable Extinguishing Media                    | Caution: Use of water spray when fighting fire may be inefficient.   |
| Specific hazards arising from the chemical        | The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapors. |
| Hazardous combustion products                     | This material will not burn.   |
| Special protective equipment for<br>fire-fighters | Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.     |

# 6. ACCIDENTAL RELEASE MEASURES

#### Personal precautions, protective equipment and emergency procedures

**Personal precautions** Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Attention! Corrosive material. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

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| Other Information                     | Refer to protective measures listed in Sections 7 and 8.   |  |  |  |
| Environmental precautions             |  |  |  |  |
| Environmental precautions             | Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains.  |  |  |  |
| Methods and material for containm     | ent and cleaning up  |  |  |  |
| Methods for containment               | Prevent further leakage or spillage if safe to do so.  |  |  |  |
| Methods for cleaning up               | Pick up and transfer to properly labeled containers.   |  |  |  |
| Prevention of secondary hazards       | Clean contaminated objects and areas thoroughly observing environmental regulations.   |  |  |  |
| Reference to other sections           | See section 8 for more information. See section 13 for more information.   |  |  |  |
|                                       | 7. HANDLING AND STORAGE  |  |  |  |
|                                       | 7. HANDLING AND STORAGE  |  |  |  |
| Precautions for safe handling         |  |  |  |  |
| Advice on safe handling               | Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. In case of insufficient ventilation, wear suitable respiratory equipment. Handle product only in closed system or provide appropriate exhaust ventilation. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. |  |  |  |
| Conditions for safe storage, includ   | ling any incompatibilities   |  |  |  |
| Storage Conditions                    | Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from moisture. Store locked up. Keep out of the reach of children. Store away from other materials.   |  |  |  |
| Flammability class                    | Not applicable   |  |  |  |

# 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Control parameters

#### **Exposure Guidelines**

| Chemical name  | ACGIH TLV   | OSHA PEL                           | NIOSH                      |
|--|---|------------------------------------|----------------------------|
| Sulfuric acid  | TWA: 0.2 mg/m <sup>3</sup> thoracic                 | TWA: 1 mg/m <sup>3</sup>           | IDLH: 15 mg/m <sup>3</sup> |
| CAS#: 7664-93-9  | particulate matter                                  | (vacated) TWA: 1 mg/m <sup>3</sup> | TWA: 1 mg/m <sup>3</sup>   |
| Iron(III) ammonium sulfate<br>dodecahydrate<br>CAS#: 7783-83-7 | TWA: 1 mg/m <sup>3</sup> Fe                         | (vacated) TWA: 1 mg/m <sup>3</sup> | TWA: 1 mg/m³ Fe            |
| Appropriate engineering controls                               |   |                                    |                            |
| Engineering Controls   | Showers<br>Eyewash stations<br>Ventilation systems. |                                    |                            |

 Individual protection measures, such as personal protective equipment

 Respiratory protection
 No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

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|--|---|--|--|--|
|  |   |  |  |  |
| Hand Protection  | Wear suitable gloves. Impervious gloves. Barrier creams may help to protect the exposed areas of skin. Gloves must be inspected prior to use. The selected protective gloves have to satisfy the specifications of EU Directive 2016/425 and the standard EN 374 derived from it. Chemical resistant gloves made of butyl rubber or nitrile rubber category III according to EN 374-1:2016.   |  |  |  |
| Eye/face protection  | Face protection shield.   |  |  |  |
| Skin and body protection   | Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron. Avoid contact with eyes, skin and clothing. Wash contaminated clothing before reuse.  |  |  |  |
| General Hygiene Considerations                                   | Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes or clothing. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Contaminated work clothing should not be allowed out of the workplace. Wash hands before breaks and immediately after handling the product. |  |  |  |
| Environmental exposure controls                                  | Local authorities should be advised if significant spillages cannot be contained. Do not allow into any sewer, on the ground or into any body of water.   |  |  |  |
| Thermal hazards  | None under normal processing.   |  |  |  |

# 9. PHYSICAL AND CHEMICAL PROPERTIES

# Information on basic physical and chemical properties

| Physical state<br>Appearance<br>Odor | aqueous solution<br>Odorless | Liquid |                 | Color<br>Odor threshold | yellow<br>Not applicable |  |
|--------------------------------------|------------------------------|--------|-----------------|-------------------------|--------------------------|--|
| Property_                            |                              |        | Values          |                         | Remarks • Method         |  |
| Molecular weight                     | t                            |        | Not applicable  |                         |                          |  |
| рН                                   |                              |        | < 0.5           |                         | @ 20 °C                  |  |
| Melting point/free                   | ezing point                  |        | ~ -6 °C / 2     | 1.2 °F                  |                          |  |
| Boiling point / bo                   | oiling range                 |        | ~ 100 °C /      | 212 °F                  |                          |  |
| Evaporation rate                     |                              |        | 1.09 (water = 1 | )                       |                          |  |
| Vapor pressure                       |                              |        | 23.177 mm Hg    | / 3.09 kPa at 2         | 5 °C / 77 °F             |  |
| Relative vapor de                    | ensity                       |        | 0.62            |                         |                          |  |
| Specific gravity (                   | water = 1 / air = 1)         |        | 1.10            |                         |                          |  |
| Partition Coeffici                   | ent (n-octanol/wate          | er)    | Not applicable  |                         |                          |  |
| Soil Organic Carl                    | bon-Water Partitior          | 1      | Not applicable  |                         |                          |  |
| Autoignition tem                     | perature                     |        | No data availat | ble                     |                          |  |
| Decomposition to                     | emperature                   |        | No data availat | ble                     |                          |  |
| Dynamic viscosit                     | ty                           |        | No data availat | ble                     |                          |  |
| Kinematic viscos                     | sity                         |        | No data availat | ble                     |                          |  |
|                                      |                              |        |                 |                         |                          |  |

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### Solubility(ies)

#### Water solubility

| Water solubility classification | Water solubility | Water Solubility Temperature |
|---------------------------------|------------------|------------------------------|
| Soluble                         | > 1000 mg/L      | 25 °C / 77 °F                |

#### Solubility in other solvents

| Chemical Name | Solubility classification | <u>Solubility</u> | Solubility Temperature |
|---------------|---------------------------|-------------------|------------------------|
| Acid          | Soluble                   | > 1000 mg/L       | 25 °C / 77 °F          |

#### **Other information**

#### **Metal Corrosivity**

#### Steel Corrosion Rate Aluminum Corrosion Rate

17.3 mm/yr / 0.68 in/yr 9.98 mm/yr / 0.39 in/yr

#### Volatile Organic Compounds (VOC) Content

| Chemical name                               | CAS No    | Volatile organic<br>compounds (VOC) content | CAA (Clean Air Act) |
|---|-----------|---|---------------------|
| Sulfuric acid                               | 7664-93-9 | No data available                           | -                   |
| Iron(III) ammonium sulfate<br>dodecahydrate | 7783-83-7 | Not applicable                              | -                   |

### **Explosive properties**

| Upper explosion limit<br>Lower explosion limit                                      | No data available<br>No data available |
|---|--|
| Flammable properties  |  |
| Flash point   | No data available                      |
| Flammability Limit in Air<br>Upper flammability limit:<br>Lower flammability limit: | No data available<br>No data available |
| Oxidizing properties  | No data available.                     |
| Bulk density  | Not applicable                         |

# **10. STABILITY AND REACTIVITY**

#### Reactivity

Not applicable. Corrosive to metal.

#### Chemical stability

Stable under normal conditions.

#### Explosion data

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> Sensitivity to Mechanical Impact None. Sensitivity to Static Discharge None.

#### Possibility of hazardous reactions

None under normal processing.

#### **Hazardous polymerization**

None under normal processing.

#### Conditions to avoid

Exposure to air or moisture over prolonged periods.

#### Incompatible materials

Oxidizing agent. Acids. Bases.

#### Hazardous decomposition products

Thermal decomposition can lead to release of irritating and toxic gases and vapors.

# 11. TOXICOLOGICAL INFORMATION

#### Information on likely routes of exposure

#### **Product Information**

| Inhalation   | Corrosive by inhalation. Inhalation of corrosive fumes/gases may cause coughing, choking, headache, dizziness, and weakness for several hours. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure, and increased heart rate. Inhaled corrosive substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal.                                   |
|--------------|--|
| Eye contact  | Causes burns. Corrosive to the eyes and may cause severe damage including blindness.<br>Causes serious eye damage. May cause irreversible damage to eyes.  |
| Skin contact | May cause irritation.  |
| Ingestion    | Causes burns. Ingestion causes burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways. |
| Symptoms     | Redness. Burning. May cause blindness. Coughing and/ or wheezing.  |

#### Acute toxicity

Based on available data, the classification criteria are not met

#### **Product Acute Toxicity Data**

No data available.

# Ingredient Acute Toxicity Data

No data available.

#### **Unknown Acute Toxicity**

4.39% of the mixture consists of ingredient(s) of unknown toxicity.

#### Acute Toxicity Estimations (ATE)

#### The following values are calculated based on chapter 3.1 of the GHS document

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| ATEmix (oral)                 | 91,292.00 mg/kg          |
|-------------------------------|--------------------------|
| ATEmix (dermal)               | No information available |
| ATEmix (inhalation-dust/mist) | No information available |
| ATEmix (inhalation-vapor)     | No information available |
| ATEmix (inhalation-gas)       | No information available |

#### Skin corrosion/irritation

Causes severe burns.

#### **Product Skin Corrosion/Irritation Data**

No data available.

#### Ingredient Skin Corrosion/Irritation Data

No data available.

| Chemical name                              | Test method                  | Species | Reported<br>dose | Exposure<br>time | Results           | Key literature<br>references and<br>sources for data |
|--|------------------------------|---------|------------------|------------------|-------------------|--|
| Sulfuric acid<br>(<10%)<br>CAS#: 7664-93-9 | Existing human<br>experience | Human   | None<br>reported | None<br>reported | Corrosive to skin | HSDB (Hazardous<br>Substances Data<br>Bank)          |

#### Serious eye damage/irritation

Classification based on data available for ingredients. Causes burns. Risk of serious damage to eyes.

### Product Serious Eye Damage/Eye Irritation Data

No data available.

#### Ingredient Eye Damage/Eye Irritation Data

No data available.

| Chemical name                              | Test method                       | Species | Reported<br>dose | Exposure<br>time | Results           | Key literature<br>references and<br>sources for data |  |  |
|--|-----------------------------------|---------|------------------|------------------|-------------------|--|--|--|
| Sulfuric acid<br>(<10%)<br>CAS#: 7664-93-9 | Existing human<br>experience      | Human   | None<br>reported | None<br>reported | Corrosive to eyes | HSDB (Hazardous<br>Substances Data<br>Bank)          |  |  |
| Respiratory or skin s                      | Respiratory or skin sensitization |         |                  |                  |                   |  |  |  |

# Based on available data, the classification criteria are not met.

#### **Product Sensitization Data**

No data available.

#### **Ingredient Sensitization Data**

No data available.

#### **STOT - single exposure**

Based on available data, the classification criteria are not met.

#### Product Specific Target Organ Toxicity Single Exposure Data No data available.

#### Ingredient Specific Target Organ Toxicity Single Exposure Data No data available.

| Chemical name           | Endpoint<br>type | Reported dose | Exposure<br>time | Toxicological effects            | Key literature references and sources for data  |
|-------------------------|------------------|---------------|------------------|----------------------------------|---|
| Sulfuric acid<br>(<10%) | Human<br>TD∟₀    | 0.144 mg/L    | 5 minutes        | Lungs, Thorax, or<br>Respiration | RTECS (Registry of Toxic<br>Effects of Chemical |
| CAS#: 7664-93-9         |                  |               |                  | Dyspnea                          | Substances)                                     |

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#### STOT - repeated exposure

Based on available data, the classification criteria are not met.

#### Product Specific Target Organ Toxicity Repeat Dose Data No data available.

# Ingredient Specific Target Organ Toxicity Repeat Exposure Data

No data available.

| Endpoint | Reported             | Exposure                      | Toxicological effects               | Key literature references and  |
|----------|----------------------|-------------------------------|-------------------------------------|--|
| type     | dose                 | time                          |                                     | sources for data   |
| Human    | 0.003 mg/L           | 168 days                      | Musculoskeletal                     | RTECS (Registry of Toxic   |
| TCLo     | -                    | -                             | Changes in teeth and                | Effects of Chemical  |
|          |                      |                               | supporting structures               | Substances)  |
|          | <b>type</b><br>Human | type dose<br>Human 0.003 mg/L | typedosetimeHuman0.003 mg/L168 days | typedosetimeHuman0.003 mg/L168 daysMusculoskeletalTCLoChanges in teeth and |

#### Carcinogenicity

Based on available data, the classification criteria are not met.

#### **Product Carcinogenicity Data**

No data available.

#### **Ingredient Carcinogenicity Data**

No data available.

| Chemical name                               | CAS No    | ACGIH | IARC    | NTP   | OSHA |
|---|-----------|-------|---------|-------|------|
| Sulfuric acid                               | 7664-93-9 | A2    | Group 1 | Known | Х    |
| Iron(III) ammonium sulfate<br>dodecahydrate | 7783-83-7 | -     | -       | -     | -    |

#### Legend

| ACGIH (American Conference of Governmental Industrial Hygienists)           | A2 - Suspected Human Carcinogen  |
|---|----------------------------------|
| IARC (International Agency for Research on Cancer)                          | Group 1 - Carcinogenic to Humans |
| NTP (National Toxicology Program)   | Known - Known Carcinogen         |
| OSHA (Occupational Safety and Health Administration of the US Department of | X - Present                      |
| Labor)  |                                  |

#### Germ cell mutagenicity

Based on available data, the classification criteria are not met.

### Product Germ Cell Mutagenicity invitro Data

No data available.

### Ingredient Germ Cell Mutagenicity invitro Data

No data available.

| Chemical name   | Test                    | Cell Strain       | Reported<br>dose | Exposure<br>time | Results                                  | Key literature<br>references and<br>sources for data              |
|---|-------------------------|-------------------|------------------|------------------|--|---|
| Sulfuric acid<br>(<10%)<br>CAS#: 7664-93-9                                    | Cytogenetic<br>analysis | Hamster ovary     | 4 mmol/L         | None<br>reported | Positive test result for<br>mutagenicity | No information<br>available                                       |
| Iron(III) ammonium<br>sulfate<br>dodecahydrate<br>(1 - 5%)<br>CAS#: 7783-83-7 | Cytogenetic<br>analysis | Rat ascites tumor | 600 mg/kg        | None<br>reported | Positive test result for<br>mutagenicity | RTECS (Registry<br>of Toxic Effects of<br>Chemical<br>Substances) |

Product Germ Cell Mutagenicity invivo Data No data available.

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#### Ingredient Germ Cell Mutagenicity invivo Data

No data available.

#### Reproductive toxicity

Based on available data, the classification criteria are not met.

#### **Product Reproductive Toxicity Data**

No data available.

#### **Ingredient Reproductive Toxicity Data**

No data available.

| Chemical name   | Endpoint<br>type | Reported dose | Exposure<br>time | Toxicological effects  | Key literature references and<br>sources for data |
|-----------------|------------------|---------------|------------------|------------------------|---|
| Sulfuric acid   | Rabbit           | 0.02 mg/L     | 7 hours          | Specific Developmental | RTECS (Registry of Toxic                          |
| (<10%)          | TCLo             | _             |                  | Abnormalities          | Effects of Chemical                               |
| CAS#: 7664-93-9 |                  |               |                  | Musculoskeletal system | Substances)                                       |

#### Aspiration hazard

Based on available data, the classification criteria are not met.

# **12. ECOLOGICAL INFORMATION**

#### Ecotoxicity

Unknown aquatic toxicity

0.01 % of the mixture consists of component(s) of unknown hazards to the aquatic environment.

#### Product Ecological Data

Aquatic Acute Toxicity No data available.

#### Aquatic Chronic Toxicity No data available.

#### Ingredient Ecological Data

Aquatic Acute Toxicity No data available.

#### Aquatic Chronic Toxicity No data available.

#### Persistence and degradability

#### Product Biodegradability Data No data available.

Bioaccumulation MATERIAL DOES NOT BIOACCUMULATE **Product Bioaccumulation Data** No data available.

 Partition Coefficient (n-octanol/water)
 Not applicable

 Mobility
 Soil Organic Carbon-Water Partition Coefficient
 Not applicable

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# Other adverse effects

No information available

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### **13. DISPOSAL CONSIDERATIONS**

| Waste treatment methods                |   |
|--|---|
| Waste from residues/unused<br>products | Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.   |
| Contaminated packaging                 | Do not reuse empty containers.  |
| US EPA Waste Number                    | D002  |
|  |   |
| Special instructions for disposal      | Work in an approved fume hood. Dilute to 3 to 5 times the volume with cold water. Adjust to a pH between 6 and 9 with an alkali, such as soda ash or sodium bicarbonate. Open cold water tap completely, slowly pour the reacted material to the drain. Allow cold water to run for 5 minutes to completely flush the system. |

# 14. TRANSPORT INFORMATION

| DOT                            |   |
|--------------------------------|---|
| UN/ID no                       | UN3264  |
| Proper shipping name           | Corrosive Liquid, Acidic, Inorganic, N.O.S.                                     |
| DOT Technical Name             | Sulfuric acid   |
| Transport hazard class(es)     | 8   |
| Packing Group                  |   |
| Reportable Quantity (RQ)       | Sulfuric acid: RQ kg= 4929.42   |
| Description                    | UN3264, Corrosive liquid, acidic, inorganic, n.o.s. (Sulfuric acid), 8, III, RQ |
| Emergency Response Guide       | 154   |
| Number                         |   |
| TDG                            |   |
| UN/ID no                       | UN3264  |
| Proper shipping name           | Corrosive Liquid, Acidic, Inorganic, N.O.S.                                     |
| TDG Technical Name             | Sulfuric acid   |
| Transport hazard class(es)     | 8   |
| Packing Group                  | III   |
| Description                    | UN3264, Corrosive liquid, acidic, inorganic, n.o.s. (Sulfuric acid), 8, III     |
| ΙΑΤΑ                           |   |
| UN number or ID number         | UN3264  |
| Proper shipping name           | Corrosive liquid, acidic, inorganic, n.o.s.                                     |
| IATA Technical Name            | Sulfuric acid   |
| Transport hazard class(es)     | 8   |
| Packing group                  |   |
| ERG Code                       | 8L  |
| Special precautions for user   | A3, A803  |
| IMDG                           |   |
| IMDG<br>UN number or ID number | UN3264  |
| Proper shipping name           | Corrosive liquid, acidic, inorganic, n.o.s.                                     |
| IMDG Technical Name            | Sulfuric acid   |
| Transport hazard class(es)     | 8   |
| Packing Group                  |   |
| EmS-No                         | F-A, S-B  |
|                                | ·   |

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#### Special precautions for user 223, 274

No special precautions necessary.

# Additional information

Note:

There is a possibility that this product could be contained in a reagent set or kit composed of various compatible dangerous goods. If the item is not in a reagent set or kit, the classification given above applies.

If the item is part of a reagent set or kit the classification would change to the following:

UN3316 Chemical Kit, Hazard Class 9, Packing Group II or III.

If the item is not regulated, the Chemical Kit classification does not apply.

### **15. REGULATORY INFORMATION**

| National Inventories |          |
|----------------------|----------|
| TSCA                 | Complies |
| DSL/NDSL             | Complies |

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

| International Inventories<br>EINECS/ELINCS<br>ENCS<br>IECSC<br>KECL - Existing substances<br>PICCS<br>TCSI<br>AICS | Complies<br>Does not comply<br>Complies<br>Complies<br>Complies<br>Complies<br>Complies |
|--|---|
| AICS<br>NZIOC  | Complies  |
|  |   |

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

TCSI - Taiwan Chemical Substances Inventory

AICS - Australian Inventory of Chemical Substances

NZIOC - New Zealand Inventory of Chemicals

#### **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 % |
|-----------------------------------|-------------------------------|
| Sulfuric acid (CAS #: 7664-93-9)  | 1.0                           |
| 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 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 | CWA - Toxic Pollutants | CWA - Priority | CWA - Hazardous |
|---------------|------------------|------------------------|----------------|-----------------|
|               |                  |                        |                |                 |
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|               | Quantities |   | Pollutants | Substances |
|---------------|------------|---|------------|------------|
| Sulfuric acid | 1000 lb    | - | -          | Х          |
| 7664-93-9     |            |   |            |            |
|               |            |   |            |            |

#### **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 | Reportable Quantity (RQ) |
|---------------|--------------------------|----------------|--------------------------|
| Sulfuric acid | 1000 lb                  | 1000 lb        | RQ 1000 lb final RQ      |
| 7664-93-9     |                          |                | RQ 454 kg final RQ       |

#### U.S. - DEA (Drug Enforcement Administration) List I & List II

| Chemical name                              | U.S DEA (Drug Enforcement<br>Administration) - List I or Precursor<br>Chemicals | U.S DEA (Drug Enforcement<br>Administration) - List II or Essential<br>Chemicals  |
|--|---|---|
| Sulfuric acid<br>(<10%)<br>CAS#: 7664-93-9 | Not Listed  | 50 gallon Export Volume (exports,<br>transshipments and international<br>transactions to designated countries<br>given in 1310.08(b)) |

#### US State Regulations

#### **California Proposition 65**

Λ

This product contains the following Proposition 65 chemicals

| California Proposition 65 |
|---------------------------|
| Carcinogen                |
|                           |

| <b>WARNING:</b> This product can expose you to chemicals including Sulfuric acid, | which is known to the State of California to |
|---|--|
| cause cancer.   |  |

For more information, go to <u>http://www.P65Warnings.ca.gov</u>

#### U.S. State Right-to-Know Regulations

This product does not contain any substances regulated by state right-to-know regulations.

| Chemical name              | New Jersey | Massachusetts | Pennsylvania |
|----------------------------|------------|---------------|--------------|
| Sulfuric acid              | Х          | X             | Х            |
| 7664-93-9                  |            |               |              |
| Iron(III) ammonium sulfate | -          | -             | Х            |
| dodecahydrate              |            |               |              |
| 7783-83-7                  |            |               |              |
|                            |            |               |              |

#### **U.S. EPA Label Information**

| Chemical name | FIFRA    | FDA             |
|---------------|----------|-----------------|
| Sulfuric acid | 180.0910 | 21 CFR 184.1095 |

# 16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

#### **Special Comments**

None

#### Additional information

EN / AGHS

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#### Global Automotive Declarable Substance List (GADSL) Not applicable NFPA and HMIS Classifications

| NFPA | Health hazards - 3 | Flammability - 0 | Instability - 0      | Physical and chemical<br>properties - |
|------|--------------------|------------------|----------------------|---------------------------------------|
| HMIS | Health hazards - 3 | Flammability - 0 | Physical hazards - 0 | Personal protection -                 |
|      |                    |                  | -                    | X                                     |
|      |                    |                  |                      | - 1                                   |

#### Key or legend to abbreviations and acronyms used in the safety data sheet

| NIOSH IDLH<br>ACGIH<br>NDF                                |   | Immediately Dangerous to Life or Health<br>ACGIH (American Conference of Governmental Industrial Hygienists)<br>no data |                 |   |  |  |  |  |  |
|---|---|---|-----------------|---|--|--|--|--|--|
| Legend - Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION |   |   |                 |   |  |  |  |  |  |
| TWA   | TWA (time-weighte   | d average)  | STEL            | STEL (Short Term Exposure Limit)  |  |  |  |  |  |
| MAC   | Maximum Allowabl  | e Concentration   | Ceiling         | Ceiling Limit Value   |  |  |  |  |  |
| X   | Listed  |   | Vacated         | These values have no official status. The only<br>binding levels of contaminants are those<br>listed in the final OSHA PEL. These lists are<br>for reference purposes only. Please note that<br>some reference state regulations of these<br>"liberated" exposure limits in their state<br>regulations. |  |  |  |  |  |
| SKN*<br>RSP+<br>C<br>M                                    | Skin designation<br>Respiratory sensiti:<br>Carcinogen<br>mutagen | zation  | SKN+<br>**<br>R | Skin sensitization<br>Hazard Designation<br>Reproductive toxicant   |  |  |  |  |  |
| Prepared By   |   | Hach Product Compliance   | e Department    |   |  |  |  |  |  |
| Issue Date  |   | 16-Aug-2018   |                 |   |  |  |  |  |  |
| Revision Date   |   | 22-Nov-2021   |                 |   |  |  |  |  |  |
| Revision Note   |   | SDS sections updated 2  |                 |   |  |  |  |  |  |

#### **Disclaimer**

USER RESPONSIBILITY: Each user should read and understand this information and incorporate it in individual site safety programs in accordance with applicable hazard communication standards and regulations.

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End of Safety Data Sheet