



Be Right™

# SAFETY DATA SHEET

Issue Date 17-Oct-2019

Revision Date 17-Oct-2019

Version 4.2

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## 1. IDENTIFICATION

### Product identifier

**Product Name** ManVer® Hardness Indicator

### Other means of identification

**Product Code(s)** 42532

**Safety data sheet number** M00635

**UN/ID no** UN2924

### Recommended use of the chemical and restrictions on use

**Recommended Use** Laboratory reagent. Indicator for hardness.

**Uses advised against** None.

**Restrictions on use** None.

### 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)

|  |                           |
|--|---------------------------|
| Flammable liquids                                  | Category 3                |
| Corrosive to metals                                | Category 1                |
| Skin corrosion/irritation                          | Category 1 Sub-category A |
| Serious eye damage/eye irritation                  | Category 1                |
| Skin sensitization                                 | Category 1                |
| Carcinogenicity                                    | Category 2                |
| Specific target organ toxicity (repeated exposure) | Category 2                |

#### **Hazards not otherwise classified (HNOC)**

Not applicable

#### **Label elements**

##### **Signal word**

Danger



**Hazard statements**

- H226 - Flammable liquid and vapor
- H290 - May be corrosive to metals
- H314 - Causes severe skin burns and eye damage
- H317 - May cause an allergic skin reaction
- H351 - Suspected of causing cancer
- H373 - May cause damage to organs through prolonged or repeated exposure

**Precautionary statements**

- P280 - Wear protective gloves/protective clothing/eye protection/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
- P272 - Contaminated work clothing should not be allowed out of the workplace
- P201 - Obtain special instructions before use
- P308 + P313 - IF exposed or concerned: Get medical advice/attention
- P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking
- P233 - Keep container tightly closed
- P240 - Ground/bond container and receiving equipment
- P241 - Use explosion-proof electrical/ ventilating/ lighting/ equipment
- P242 - Use only non-sparking tools
- P243 - Take precautionary measures against static discharge
- P370 + P378 - In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish
- P403 + P235 - Store in a well-ventilated place. Keep cool
- P234 - Keep only in original container
- P390 - Absorb spillage to prevent material damage
- P260 - Do not breathe dust/fume/gas/mist/vapors/spray

**Other Hazards Known**

- May be harmful if swallowed
- 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 Range | HMRIC # |
|------------------------------|-----------|---------------|---------|
| 1,2-Propanediol              | 57-55-6   | 90 - 100%     | -       |
| Hydroxylamine, hydrochloride | 5470-11-1 | 1 - 5%        | -       |
| Isopropyl alcohol            | 67-63-0   | 1 - 5%        | -       |

#### 4. FIRST AID MEASURES

##### Description of first aid measures

|   |  |
|---|--|
| <b>General advice</b>                     | Show this safety data sheet to the doctor in attendance. IF exposed or concerned: Get medical advice/attention.  |
| <b>Inhalation</b>                         | Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get immediate medical advice/attention. |
| <b>Eye contact</b>                        | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention.   |
| <b>Skin contact</b>                       | Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get immediate medical advice/attention. May cause an allergic skin reaction.   |
| <b>Ingestion</b>                          | 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.  |
| <b>Self-protection of the first aider</b> | Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation.  |

##### Most important symptoms and effects, both acute and delayed

**Symptoms** Burning sensation. Itching. Rashes. Hives.

##### Indication of any immediate medical attention and special treatment needed

**Note to physicians** Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. May cause sensitization in susceptible persons. Treat symptomatically.

#### 5. FIRE-FIGHTING MEASURES

|   |   |
|---|---|
| <b>Suitable Extinguishing Media</b>               | Dry chemical. Carbon dioxide (CO2). Water spray. Alcohol resistant foam.  |
| <b>Unsuitable Extinguishing Media</b>             | Caution: Use of water spray when fighting fire may be inefficient.  |
| <b>Specific hazards arising from the chemical</b> | Risk of ignition. Keep product and empty container away from heat and sources of ignition. In the event of fire, cool tanks with water spray. Fire residues and contaminated fire |

extinguishing water must be disposed of in accordance with local regulations. The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapors. Product is or contains a sensitizer. May cause sensitization by skin contact.

**Hazardous combustion products** Chlorides. Carbon monoxide, Carbon dioxide.

**Special protective equipment for fire-fighters** Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

## 6. ACCIDENTAL RELEASE MEASURES

**U.S. Notice** Only persons properly qualified to respond to an emergency involving hazardous substances may respond to a spill according to federal regulations (OSHA 29 CFR 1910.120(a)(v)) and per your company's emergency response plan and guidelines/procedures. See Section 13, Special Instructions for disposal assistance. Outside of the US, only persons properly qualified according to state or local regulations should respond to a spill involving chemicals.

### Personal precautions, protective equipment and emergency procedures

**Personal precautions** Evacuate personnel to safe areas. Use personal protective equipment as required. See section 8 for more information. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Pay attention to flashback. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Do not touch or walk through spilled material. Attention! Corrosive material.

**Other Information** Ventilate the area. Refer to protective measures listed in Sections 7 and 8.

### Environmental precautions

**Environmental precautions** Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Should not be released into the environment. Do not allow to enter into soil/subsoil.

### Methods and material for containment and cleaning up

**Methods for containment** Stop leak if you can do it without risk. Do not touch or walk through spilled material. A vapor suppressing foam may be used to reduce vapors. Dike far ahead of spill to collect runoff water. Keep out of drains, sewers, ditches and waterways. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

**Methods for cleaning up** Take precautionary measures against static discharges. Dam up. Soak up with inert absorbent material. 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

### Precautions for safe handling

**Advice on safe handling** Use personal protection equipment. Avoid contact with skin and eyes. Avoid breathing vapors or mists. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use grounding and bonding connection when transferring this

material to prevent static discharge, fire or explosion. Use spark-proof tools and explosion-proof equipment. Keep in an area equipped with sprinklers. Use according to package label instructions. 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, including any incompatibilities**

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep in properly labeled containers. Do not store near combustible materials. Keep in an area equipped with sprinklers. Protect from moisture. Store locked up. Keep out of the reach of children. Store away from other materials. Store in accordance with particular national and local regulations.

**Flammability class** Class IC

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Control parameters

**Exposure Guidelines**

| Chemical name                      | ACGIH TLV                     | OSHA PEL  | NIOSH   |
|------------------------------------|-------------------------------|---|---|
| Isopropyl alcohol<br>CAS#: 67-63-0 | STEL: 400 ppm<br>TWA: 200 ppm | TWA: 400 ppm<br>TWA: 980 mg/m <sup>3</sup><br>(vacated) TWA: 400 ppm<br>(vacated) TWA: 980 mg/m <sup>3</sup><br>(vacated) STEL: 500 ppm<br>(vacated) STEL: 1225 mg/m <sup>3</sup> | IDLH: 2000 ppm<br>TWA: 400 ppm<br>TWA: 980 mg/m <sup>3</sup><br>STEL: 500 ppm<br>STEL: 1225 mg/m <sup>3</sup> |

Appropriate engineering controls

**Engineering Controls** Showers  
 Eyewash stations  
 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.

**Hand Protection** Wear suitable gloves. Impervious gloves.

**Eye/face protection** Face protection shield.

**Skin and body protection** Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron. Antistatic boots.

**General Hygiene Considerations** Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Wear suitable gloves and eye/face protection. Avoid contact with skin, eyes or clothing. Remove and wash contaminated clothing and gloves, including the inside, before re-use.

**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 Liquid  
Appearance aqueous solution  
Odor Fruity  
Color dark red  
Odor threshold No data available

| Property  | Values                                 | Remarks • Method |
|---|--|------------------|
| Molecular weight                                | No data available                      |                  |
| pH  | 1.09                                   |                  |
| Melting point/freezing point                    | No data available                      |                  |
| Boiling point / boiling range                   | 118 °C / 244 °F                        |                  |
| Evaporation rate                                | 0.05 (water = 1)                       |                  |
| Vapor pressure                                  | 1.35 mm Hg / 0.18 kPa at 20 °C / 68 °F |                  |
| Vapor density (air = 1)                         | 2.08 (Air = 1)                         |                  |
| Specific gravity (water = 1 / air = 1)          | 1.01                                   |                  |
| Partition Coefficient (n-octanol/water)         | Not applicable                         |                  |
| Soil Organic Carbon-Water Partition Coefficient | Not applicable                         |                  |
| Autoignition temperature                        | No data available                      |                  |
| Decomposition temperature                       | No data available                      |                  |
| Dynamic viscosity                               | No data available                      |                  |
| Kinematic viscosity                             | No data available                      |                  |

### 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 | Solubility  | Solubility Temperature |
|---------------|---------------------------|-------------|------------------------|
| Acid          | Soluble                   | > 1000 mg/L | 25 °C / 77 °F          |

### Other Information

#### Metal Corrosivity

Classified as corrosive to metal according to GHS criteria

Steel Corrosion Rate

7.32 mm/yr / 0.29 in/yr

Aluminum Corrosion Rate

0.03 mm/yr / 0 in/yr

#### Volatile Organic Compounds (VOC) Content

See ingredients information below

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| Chemical name                | CAS No.   | Volatile organic compounds (VOC) content | CAA (Clean Air Act) |
|------------------------------|-----------|--|---------------------|
| 1,2-Propanediol              | 57-55-6   | No data available                        | X                   |
| Hydroxylamine, hydrochloride | 5470-11-1 | No data available                        | -                   |
| Isopropyl alcohol            | 67-63-0   | 100%                                     | X                   |

#### Explosive properties

**Upper explosion limit** No data available  
**Lower explosion limit** No data available

#### Flammable properties

**Flash point** 26 °C / 79 °F  
**Method** CC (closed cup)

#### Flammability Limit in Air

**Upper flammability limit** No data available  
**Lower flammability limit** No data available

#### Oxidizing properties

No data available.

#### Bulk density

No data available

## 10. STABILITY AND REACTIVITY

#### Reactivity

Not applicable.

#### Chemical stability

Stable under normal conditions.

#### Explosion data

**Sensitivity to Mechanical Impact** None.  
**Sensitivity to Static Discharge** Yes.

#### Possibility of Hazardous Reactions

None under normal processing.

#### Hazardous polymerization

None under normal processing.

#### Conditions to avoid

Heat, flames and sparks. 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. Causes serious eye damage. May cause irreversible damage to eyes.

**Skin contact** May cause irritation. May cause sensitization by skin contact. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.

**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. Itching. Rashes. Hives.

**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.

| Chemical name  | Endpoint type           | Reported dose | Exposure time | Toxicological effects                   | Key literature references and sources for data                   |
|--|-------------------------|---------------|---------------|---|--|
| 1,2-Propanediol (90 - 100%)<br>CAS#: 57-55-6             | Rat LD <sub>50</sub>    | 20000 mg/kg   | None reported | None reported                           | RTECS (Registry of Toxic Effects of Chemical Substances)         |
| Hydroxylamine, hydrochloride (1 - 5%)<br>CAS#: 5470-11-1 | Rat LD <sub>50</sub>    | 141 mg/kg     | None reported | None reported                           | Vendor SDS   |
| Isopropyl alcohol (1 - 5%)<br>CAS#: 67-63-0              | Rat LD <sub>50</sub>    | 4710 mg/kg    | None reported | <b>Behavioral</b><br>General anesthetic | OECD 429: Skin Sensitization: Local Lymph Node Assay             |
| Chemical name  | Endpoint type           | Reported dose | Exposure time | Toxicological effects                   | Key literature references and sources for data                   |
| 1,2-Propanediol (90 - 100%)<br>CAS#: 57-55-6             | Rabbit LD <sub>50</sub> | 20800 mg/kg   | None reported | None reported                           | IUCLID (The International Uniform Chemical Information Database) |
| Hydroxylamine, hydrochloride (1 - 5%)<br>CAS#: 5470-11-1 | None reported           | None reported | None reported | None reported                           | No information available   |
| Isopropyl alcohol (1 - 5%)<br>CAS#: 67-63-0              | Rabbit LD <sub>50</sub> | 12800 mg/kg   | None reported | None reported                           | RTECS (Registry of Toxic Effects of Chemical Substances)         |
| Chemical name  | Endpoint type           | Reported dose | Exposure time | Toxicological effects                   | Key literature references and sources for data                   |
| Isopropyl alcohol  | Rat                     | 72.6 mg/L     | 4 hours       | <b>Behavioral</b>                       | RTECS (Registry of Toxic   |

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|                           |                  |  |  |   |                                    |
|---------------------------|------------------|--|--|---|------------------------------------|
| (1 - 5%)<br>CAS#: 67-63-0 | LC <sub>50</sub> |  |  | General anesthetic<br><b>Lungs, Thorax, or<br/>Respiration</b><br>Other changes | Effects of Chemical<br>Substances) |
|---------------------------|------------------|--|--|---|------------------------------------|

**Unknown Acute Toxicity**

0% 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

|                                      |                          |
|--------------------------------------|--------------------------|
| <b>ATEmix (oral)</b>                 | 3,168.00 mg/kg           |
| <b>ATEmix (dermal)</b>               | 25,229.00 mg/kg          |
| <b>ATEmix (inhalation-dust/mist)</b> | No information available |
| <b>ATEmix (inhalation-vapor)</b>     | No information available |
| <b>ATEmix (inhalation-gas)</b>       | 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 dose | Exposure time | Results            | Key literature references and sources for data           |
|--|----------------------|---------|---------------|---------------|--------------------|--|
| Isopropyl alcohol<br>(1 - 5%)<br>CAS#: 67-63-0 | Standard Draize Test | Rabbit  | 500 mg        | None reported | Mild skin irritant | RTECS (Registry of Toxic Effects of Chemical Substances) |

**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 dose | Exposure time | Results           | Key literature references and sources for data           |
|--|----------------------|---------|---------------|---------------|-------------------|--|
| Isopropyl alcohol<br>(1 - 5%)<br>CAS#: 67-63-0 | Standard Draize Test | Rabbit  | 100 mg        | None reported | Corrosive to eyes | RTECS (Registry of Toxic Effects of Chemical Substances) |

**Respiratory or skin sensitization**

May cause sensitization by skin contact.

**Product Sensitization Data**

No data available.

**Ingredient Sensitization Data**

No data available.

| Chemical name     | Test method   | Species    | Results                               | Key literature references and sources for data |
|-------------------|---------------|------------|---------------------------------------|--|
| Isopropyl alcohol | None reported | Guinea pig | Not confirmed to be a skin sensitizer | OECD 429: Skin Sensitization: Local            |

|                           |  |  |  |                  |
|---------------------------|--|--|--|------------------|
| (1 - 5%)<br>CAS#: 67-63-0 |  |  |  | Lymph Node Assay |
|---------------------------|--|--|--|------------------|

**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 type             | Reported dose | Exposure time | Toxicological effects  | Key literature references and sources for data           |
|--|---------------------------|---------------|---------------|--|--|
| Isopropyl alcohol<br>(1 - 5%)<br>CAS#: 67-63-0 | Human<br>TD <sub>Lo</sub> | 223 mg/kg     | None reported | <b>Behavioral</b><br>Hallucinations, Distorted perceptions<br><b>Cardiac</b><br>Pulse rate decrease with fall in BP<br><b>Vascular</b><br>BP lowering not characterized in autonomic section | RTECS (Registry of Toxic Effects of Chemical Substances) |
| Chemical name                                  | Endpoint type             | Reported dose | Exposure time | Toxicological effects  | Key literature references and sources for data           |
| Isopropyl alcohol<br>(1 - 5%)<br>CAS#: 67-63-0 | Human<br>TC <sub>Lo</sub> | 35 mg/L       | 4 hours       | <b>Cardiac</b><br>Pulse rate decrease with fall in BP<br><b>Lungs, Thorax, or Respiration</b><br>Other changes   | RTECS (Registry of Toxic Effects of Chemical Substances) |

**STOT - repeated exposure**

May cause damage to organs.

**Product Specific Target Organ Toxicity Repeat Dose Data**

No data available.

**Ingredient Specific Target Organ Toxicity Repeat Exposure Data**

No data available.

| Chemical name   | Endpoint type           | Reported dose | Exposure time | Toxicological effects  | Key literature references and sources for data                |
|---|-------------------------|---------------|---------------|--|---|
| Hydroxylamine, hydrochloride<br>(1 - 5%)<br>CAS#: 5470-11-1 | Rat<br>LD <sub>Lo</sub> | 2478 mg/kg    | 6 days        | <b>Behavioral</b><br>Food intake<br><b>Blood</b><br>Changes in blood leukocyte count<br><b>Nutritional and Gross Metabolic</b><br>Weight loss or decreased weight gain                       | NIOSH (National Institute for Occupational Safety and Health) |
| Chemical name   | Endpoint type           | Reported dose | Exposure time | Toxicological effects  | Key literature references and sources for data                |
| 1,2-Propanediol<br>(90 - 100%)<br>CAS#: 57-55-6             | Rat<br>TC <sub>Lo</sub> | 2.180 mg/L    | 90 days       | <b>Behavioral</b><br>Food intake<br><b>Biochemical</b><br>Enzyme inhibition, induction, or change in blood or tissue levels (dehydrogenases)<br><b>Endocrine</b><br>Changes in spleen weight | RTECS (Registry of Toxic Effects of Chemical Substances)      |

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### **Carcinogenicity**

Classification based on data available for ingredients. Contains a known or suspected carcinogen.

### **Product Carcinogenicity Data**

No data available.

### **Ingredient Carcinogenicity Data**

No data available.

| <b>Chemical name</b>            | <b>CAS No.</b> | <b>ACGIH</b> | <b>IARC</b> | <b>NTP</b> | <b>OSHA</b> |
|---------------------------------|----------------|--------------|-------------|------------|-------------|
| 1,2-Propanediol                 | 57-55-6        | -            | -           | -          | -           |
| Hydroxylamine,<br>hydrochloride | 5470-11-1      | -            | -           | -          | -           |
| Isopropyl alcohol               | 67-63-0        | -            | Group 3     | -          | X           |

### **Legend**

|   |  |
|---|--|
| <b>ACGIH (American Conference of Governmental Industrial Hygienists)</b>                  | Does not apply                                   |
| <b>IARC (International Agency for Research on Cancer)</b>                                 | Group 3 - Not classifiable as a human carcinogen |
| <b>NTP (National Toxicology Program)</b>  | Does not apply                                   |
| <b>OSHA (Occupational Safety and Health Administration of the US Department of Labor)</b> | X - Present                                      |

### **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.

| <b>Chemical name</b>                            | <b>Test</b>          | <b>Cell Strain</b> | <b>Reported dose</b> | <b>Exposure time</b> | <b>Results</b>                        | <b>Key literature references and sources for data</b>    |
|---|----------------------|--------------------|----------------------|----------------------|---------------------------------------|--|
| 1,2-Propanediol<br>(90 - 100%)<br>CAS#: 57-55-6 | Cytogenetic analysis | Hamster fibroblast | 32000 mg/L           | None reported        | Positive test result for mutagenicity | RTECS (Registry of Toxic Effects of Chemical Substances) |

### **Product Germ Cell Mutagenicity invivo Data**

No data available.

### **Ingredient Germ Cell Mutagenicity invivo Data**

No data available.

| <b>Chemical name</b>                           | <b>Test</b>          | <b>Species</b> | <b>Reported dose</b> | <b>Exposure time</b> | <b>Results</b>                        | <b>Key literature references and sources for data</b>    |
|--|----------------------|----------------|----------------------|----------------------|---------------------------------------|--|
| Isopropyl alcohol<br>(1 - 5%)<br>CAS#: 67-63-0 | Cytogenetic analysis | Rat            | 0.00103 mg/L         | 16 weeks             | Positive test result for mutagenicity | RTECS (Registry of Toxic Effects of Chemical Substances) |

### **Reproductive toxicity**

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

### **Product Reproductive Toxicity Data**

No data available.

### **Ingredient Reproductive Toxicity Data**

|                  |                     |
|------------------|---------------------|
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|------------------|---------------------|

No data available.

| Chemical name                                  | Endpoint type           | Reported dose | Exposure time | Toxicological effects  | Key literature references and sources for data           |
|--|-------------------------|---------------|---------------|--|--|
| Isopropyl alcohol<br>(1 - 5%)<br>CAS#: 67-63-0 | Rat<br>TD <sub>Lo</sub> | 32.4 mg/kg    | None reported | Effects on Embryo or Fetus<br>Fetal death                      | RTECS (Registry of Toxic Effects of Chemical Substances) |
| Chemical name                                  | Endpoint type           | Reported dose | Exposure time | Toxicological effects  | Key literature references and sources for data           |
| Isopropyl alcohol<br>(1 - 5%)<br>CAS#: 67-63-0 | Rat<br>TC <sub>Lo</sub> | 7000 mg/L     | 19 days       | Specific Developmental Abnormalities<br>Musculoskeletal system | RTECS (Registry of Toxic Effects of Chemical Substances) |

**Aspiration hazard**

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

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity**

**Unknown aquatic toxicity**

0% of the mixture consists of components(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.

| Chemical name                                   | Exposure time | Species                          | Endpoint type    | Reported dose | Key literature references and sources for data                   |
|---|---------------|----------------------------------|------------------|---------------|--|
| 1,2-Propanediol<br>(90 - 100%)<br>CAS#: 57-55-6 | 96 hours      | <i>Pimephales promelas</i>       | LC <sub>50</sub> | 51400 mg/L    | IUCLID (The International Uniform Chemical Information Database) |
| Isopropyl alcohol<br>(1 - 5%)<br>CAS#: 67-63-0  | 96 hours      | <i>Pimephales promelas</i>       | LC <sub>50</sub> | 4200 mg/L     | IUCLID (The International Uniform Chemical Information Database) |
| Chemical name                                   | Exposure time | Species                          | Endpoint type    | Reported dose | Key literature references and sources for data                   |
| 1,2-Propanediol<br>(90 - 100%)<br>CAS#: 57-55-6 | 48 Hours      | <i>Daphnia magna</i>             | LC <sub>50</sub> | 34400 mg/L    | IUCLID (The International Uniform Chemical Information Database) |
| Isopropyl alcohol<br>(1 - 5%)<br>CAS#: 67-63-0  | 48 Hours      | None reported                    | LC <sub>50</sub> | 1400 mg/L     | IUCLID (The International Uniform Chemical Information Database) |
| Chemical name                                   | Exposure time | Species                          | Endpoint type    | Reported dose | Key literature references and sources for data                   |
| 1,2-Propanediol<br>(90 - 100%)<br>CAS#: 57-55-6 | 96 hours      | <i>Selenastrum capricornutum</i> | EC <sub>50</sub> | 19000 mg/L    | IUCLID (The International Uniform Chemical Information Database) |
| Isopropyl alcohol<br>(1 - 5%)<br>CAS#: 67-63-0  | 72 Hours      | <i>Scenedesmus subspicatus</i>   | EC <sub>50</sub> | > 1000 mg/L   | IUCLID (The International Uniform Chemical Information Database) |

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**Aquatic Chronic Toxicity**

No data available.

**Persistence and degradability**

**Product Biodegradability Data**

No data available.

**Bioaccumulation**

**Product Bioaccumulation Data**

No data available.

**Partition Coefficient (n-octanol/water)**

Not applicable

**Mobility**

**Soil Organic Carbon-Water Partition Coefficient**

Not applicable

**Other adverse effects**

Contains a substance with an endocrine-disrupting potential.

**13. DISPOSAL CONSIDERATIONS**

**Waste treatment methods**

**Waste from residues/unused products**

Should not be released into the environment. Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

**Contaminated packaging**

Empty containers pose a potential fire and explosion hazard. Do not cut, puncture or weld containers.

**US EPA Waste Number**

D001, D002

**Special instructions for disposal**

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.

**14. TRANSPORT INFORMATION**

**DOT**

|  |  |
|--|--|
| <b>UN/ID no</b>                        | UN2924   |
| <b>Proper shipping name</b>            | Flammable liquids, corrosive, n.o.s.   |
| <b>DOT Technical Name</b>              | Hydroxylamine, hydrochloride, Isopropyl alcohol                              |
| <b>Hazard Class</b>                    | 3  |
| <b>Subsidiary class</b>                | 8  |
| <b>Packing Group</b>                   | III  |
| <b>Description</b>                     | UN2924, Flammable liquids, corrosive, n.o.s. (Isopropyl alcohol), 3 (8), III |
| <b>Emergency Response Guide Number</b> | 132  |

**TDG**

|                             |   |
|-----------------------------|---|
| <b>UN/ID no</b>             | UN2924  |
| <b>Proper shipping name</b> | Flammable liquid, corrosive, n.o.s.             |
| <b>TDG Technical Name</b>   | Hydroxylamine, hydrochloride, Isopropyl alcohol |
| <b>Hazard Class</b>         | 3   |
| <b>Subsidiary class</b>     | 8   |

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**Packing Group** III  
**Description** UN2924, Flammable liquid, corrosive, n.o.s. (Isopropyl alcohol), 3 (8), III

#### IATA

**UN/ID no** UN2924  
**Proper shipping name** Flammable liquid, corrosive, n.o.s.  
**IATA Technical Name** Hydroxylamine, hydrochloride, Isopropyl alcohol  
**Hazard Class** 3  
**Subsidiary hazard class** 8  
**Packing Group** III  
**ERG Code** 3C  
**Special precautions for user** A3, A803

#### IMDG

**UN/ID no** UN2924  
**Proper shipping name** Flammable liquid, corrosive, n.o.s.  
**IMDG Technical Name** Hydroxylamine, hydrochloride, Isopropyl alcohol  
**Hazard Class** 3  
**Subsidiary hazard class** 8  
**Packing Group** III  
**EmS-No** F-E, S-C  
**Special precautions for user** 223, 274

**Note:** No special precautions necessary.

#### **Additional information**

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

**EINECS/ELINCS** Complies  
**ENCS** Complies  
**IECSC** Complies  
**KECL** Complies  
**PICCS** Complies  
**TCSI** Complies  
**AICS** Complies  
**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

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## 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 % |
|------------------------------------|-------------------------------|
| Isopropyl alcohol (CAS #: 67-63-0) | 1.0                           |

### SARA 311/312 Hazard Categories

|                                   |     |
|-----------------------------------|-----|
| Acute health hazard               | Yes |
| Chronic Health Hazard             | Yes |
| Fire hazard                       | Yes |
| 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)

### 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

## US State Regulations

### California Proposition 65

This product does not contain any Proposition 65 chemicals

### 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 |
|------------------------------|------------|---------------|--------------|
| 1,2-Propanediol<br>57-55-6   | X          | -             | X            |
| Isopropyl alcohol<br>67-63-0 | X          | X             | X            |

### U.S. EPA Label Information

| Chemical name     | FIFRA                | FDA             |
|-------------------|----------------------|-----------------|
| 1,2-Propanediol   | 180.0910<br>180.0930 | 21 CFR 184.1666 |
| Isopropyl alcohol | 180.0950             | -               |

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

### Special Comments

None

### Additional information

#### Global Automotive Declarable Substance List (GADSL)

Not applicable

#### NFPA and HMIS Classifications

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

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

NIOSH IDLH *Immediately Dangerous to Life or Health*  
 ACGIH ACGIH (American Conference of Governmental Industrial Hygienists)  
 NDF *no data*

**Legend - Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

|      |                                 |         |   |
|------|---------------------------------|---------|---|
| TWA  | TWA (time-weighted average)     | STEL    | STEL (Short Term Exposure Limit)  |
| MAC  | Maximum Allowable Concentration | Ceiling | Ceiling Limit Value   |
| X    | Listed                          | Vacated | These values have no official status. The only binding levels of contaminants are those listed in the final OSHA PEL. These lists are for reference purposes only. Please note that some reference state regulations of these "liberated" exposure limits in their state regulations. |
| SKN* | Skin designation                | SKN+    | Skin sensitization  |
| RSP+ | Respiratory sensitization       | **      | Hazard Designation  |
| C    | Carcinogen                      | R       | Reproductive toxicant   |
| M    | mutagen                         |         |   |

**Prepared By** Hach Product Compliance Department  
**Issue Date** 17-Oct-2019  
**Revision Date** 17-Oct-2019  
**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.

**THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED TO BE ACCURATE. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.**

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**End of Safety Data Sheet**