



# SAFETY DATA SHEET

**Be Right™**

Issue Date 18-May-2016

Revision Date 21-Feb-2018

Version 3.2

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## 1. IDENTIFICATION

### Product identifier

**Product Name** Dissolved Oxygen 1 Reagent

### Other means of identification

**Product Code(s)** 98199

**Safety data sheet number** M00029

**UN/ID no** UN3077

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

**Recommended Use** Laboratory Use.

**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 +1(515)232-2533 - 8am - 4pm CST\*\*\*

## 2. HAZARDS IDENTIFICATION

### Classification

#### **Regulatory Status**

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

Serious eye damage/eye irritation	Category 1***
Specific target organ toxicity (repeated exposure)	Category 2***
Chronic aquatic toxicity	Category 2***

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

Not applicable

#### **Label elements**

**Signal word - Danger\*\*\***



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### Hazard statements

H318 - Causes serious eye damage  
H373 - May cause damage to organs through prolonged or repeated exposure  
H411 - Toxic to aquatic life with long lasting effects\*\*\*

### Precautionary statements

P280 - Wear protective gloves/protective clothing/eye protection/face protection  
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  
P260 - Do not breathe dust/fume/gas/mist/vapors/spray  
P273 - Avoid release to the environment  
P391 - Collect spillage  
P501 - Dispose of contents/ container to an approved waste disposal plant\*\*\*

### Other Hazards Known

May be harmful if swallowed\*\*\*

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

### Substance

**Chemical Name** Manganous Sulfate  
**Chemical Family** Inorganic salt.  
**Formula** MnSO<sub>4</sub>  
**CAS No** 7785-87-7  
**Alternate CAS Number** 10034-96-5 - Monohydrate  
**Alternate CAS Number** 10101-68-5  
**Type** - Tetrahydrate

Percent ranges are used where confidential product information is applicable.\*\*\*

Chemical name	CAS No.	Percent Range	HMRIC #
Manganese(II) sulfate***	7785-87-7	100%	-

#### 4. FIRST AID MEASURES

##### Description of first aid measures

<b>General advice</b>	Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.***
<b>Inhalation</b>	Remove to fresh air. Get medical attention immediately if symptoms occur.***
<b>Eye contact</b>	Get immediate medical advice/attention. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area.***
<b>Skin contact</b>	Wash off immediately with soap and plenty of water for at least 15 minutes. Get medical attention if irritation develops and persists.***
<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. Call a physician.***
<b>Self-protection of the first aider</b>	Avoid contact with skin, eyes or clothing.***

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

**Symptoms** Burning sensation.\*\*\*

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

**Note to physicians** Treat symptomatically.

#### 5. FIRE-FIGHTING MEASURES

<b>Suitable Extinguishing Media</b>	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
<b>Unsuitable Extinguishing Media</b>	Caution: Use of water spray when fighting fire may be inefficient.
<b>Specific hazards arising from the chemical</b>	No information available.
<b>Hazardous combustion products</b>	This material will not burn.
<b>Special protective equipment for fire-fighters</b>	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.

#### 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

<b>Personal precautions</b>	Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. Ensure adequate ventilation. Evacuate personnel to safe areas.***
<b>Other Information</b>	Refer to protective measures listed in Sections 7 and 8.***

### Environmental precautions

Environmental precautions Prevent further leakage or spillage if safe to do so.\*\*\*

### Methods and material for containment 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

### 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. Do not eat, drink or smoke when using this product. Ensure adequate ventilation.\*\*\*

### Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children.\*\*\*

Flammability class Not applicable

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

Exposure Guidelines \*\*\*

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Manganese(II) sulfate*** CAS#: 7785-87-7	TWA: 0.02 mg/m <sup>3</sup> TWA: 0.1 mg/m <sup>3</sup> ***	(vacated) Ceiling: 5 mg/m <sup>3</sup> Ceiling: 5 mg/m <sup>3</sup> ***	IDLH: 500 mg/m <sup>3</sup> Mn TWA: 1 mg/m <sup>3</sup> Mn STEL: 3 mg/m <sup>3</sup> Mn***

### 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.\*\*\*

Eye/face protection Tight sealing safety goggles.\*\*\*

Skin and body protection Wear suitable protective clothing.\*\*\*

General Hygiene Considerations Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this 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** Solid  
**Appearance** powder  
**Odor** Odorless  
**Color** pink  
**Odor threshold** No data available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
Molecular weight	151.01 g/mole	
pH	3.7	5% Solution ***
Melting point/freezing point	> 400 °C / 752 °F	***
Boiling point / boiling range	850 °C / 1562 °F	***
Evaporation rate	Not applicable	
Vapor pressure	Not applicable	***
Vapor density (air = 1)	Not applicable	***
Specific gravity (water = 1 / air = 1)	3.25	***
Partition Coefficient (n-octanol/water)	log K <sub>ow</sub> ~ 0	
Soil Organic Carbon-Water Partition Coefficient	log K <sub>oc</sub> ~ 0	
Autoignition temperature	No data available	
Decomposition temperature	850 °C / 1562 °F	
Dynamic viscosity	Not applicable	
Kinematic viscosity	Not applicable	

### Solubility(ies)

#### Water solubility

<u>Water solubility classification</u>	<u>Water solubility</u>	<u>Water Solubility Temperature</u>
Completely soluble	629000 mg/L	20 °C / 68 °F

#### Solubility in other solvents

<u>Chemical Name</u>	<u>Solubility classification</u>	<u>Solubility</u>	<u>Solubility Temperature</u>
Acids	Soluble	> 1000 mg/L	25 °C / 77 °F
Methanol	Slightly soluble	> 0.1 mg/L	25 °C / 77 °F
Ethyl alcohol	Insoluble	< 0.1 mg/L	25 °C / 77 °F
Ether	Insoluble	< 0.1 mg/L	25 °C / 77 °F

### Other Information

#### Metal Corrosivity

**Steel Corrosion Rate** Not applicable  
**Aluminum Corrosion Rate** \*\*\* 0.05 mm/yr / 0 in/yr

#### Volatile Organic Compounds (VOC) Content

This Product is by Weight 100% an Individual Pure Chemical Substance\*\*\*

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Chemical name	CAS No.	Volatile organic compounds (VOC) content	CAA (Clean Air Act)
Manganese(II) sulfate***	7785-87-7	No data available	-

#### Explosive properties

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

#### Flammable properties

Flash point Not applicable  
Method No information available

#### 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

#### Particle Size

No information available

#### Particle Size Distribution

No information available

## 10. STABILITY AND REACTIVITY

#### Reactivity

Not applicable.

#### Chemical stability

Stability Stable under normal conditions.

#### Explosion data

Sensitivity to Mechanical Impact None  
Sensitivity to Static Discharge None.

#### Possibility of Hazardous Reactions

Possibility of Hazardous Reactions None under normal processing.

#### Hazardous polymerization

None under normal processing.

#### Conditions to avoid

Conditions to avoid None known based on information supplied.

#### Incompatible materials

Incompatible materials Strong acids. Strong bases. Strong oxidizing agents.\*\*\*

#### Hazardous Decomposition Products

Sulfur oxides. Manganese oxides.

## 11. TOXICOLOGICAL INFORMATION

#### Information on Likely Routes of Exposure

Product Information \*\*\*

<b>Inhalation</b>	No known effect based on information supplied.
<b>Eye contact</b>	Severely irritating to eyes. Causes serious eye damage. May cause burns. May cause irreversible damage to eyes.***
<b>Skin contact</b>	May cause irritation.***
<b>Ingestion</b>	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.***
<b>Symptoms</b>	Redness. Burning. May cause blindness.***
<b>Aggravated Medical Conditions</b>	Eye disorders. Blood disorders. Kidney disorders. Respiratory disorders.***
<b>Toxicologically synergistic products</b>	None known.
<b>Toxicokinetics, metabolism and distribution</b>	This Product is by Weight 100% an Individual Pure Chemical Substance. See ingredients information below.***

Chemical name	Toxicokinetics, metabolism and distribution
Manganese(II) sulfate*** (100%) CAS#: 7785-87-7	Available data indicate that exposure to excess manganese for 14 days or less (acute duration) or up to a year (intermediate duration) has an effect on the respiratory system and the nervous system, with little to no effect on other organ systems.***

**Product Acute Toxicity Data**

Oral Exposure Route  
 Dermal Exposure Route  
 Inhalation (Dust/Mist) Exposure Route  
 Inhalation (Vapor) Exposure Route  
 Inhalation (Gas) Exposure Route

This Product is by Weight 100% an Individual Pure Chemical Substance\*\*\*  
 If available, see ingredient data below\*\*\*  
 If available, see ingredient data below\*\*\*  
 If available, see ingredient data below\*\*\*  
 If available, see ingredient data below\*\*\*  
 If available, see ingredient data below\*\*\*

**Unknown Acute Toxicity**

0% of the mixture consists of ingredient(s) of unknown toxicity.\*\*\*

**Acute Toxicity Estimations (ATE)**

Not applicable\*\*\*

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

\*\*\*

ATEmix (oral)	No information available
ATEmix (dermal)	No information available
ATEmix (inhalation-dust/mist)	No information available
ATEmix (inhalation-vapor)	No information available
ATEmix (inhalation-gas)	No information available

**Ingredient Acute Toxicity Data**

Oral Exposure Route

If available, see data below\*\*\*

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Manganese(II) sulfate*** (100%) CAS#: 7785-87-7	Rat LD <sub>50</sub> ***	2150*** mg/kg***	None reported	None reported	IUCLID (The International Uniform Chemical Information Database)***

Dermal Exposure Route  
 Inhalation (Dust/Mist) Exposure Route  
 Inhalation (Vapor) Exposure Route  
 Inhalation (Gas) Exposure Route

If available, see data below  
 If available, see data below  
 If available, see data below  
 If available, see data below

**Product Specific Target Organ Toxicity Single Exposure Data**

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Oral Exposure Route If available, see ingredient data below\*\*\*  
Dermal Exposure Route If available, see ingredient data below\*\*\*  
Inhalation (Dust/Mist) Exposure Route If available, see ingredient data below\*\*\*  
Inhalation (Vapor) Exposure Route If available, see ingredient data below\*\*\*  
Inhalation (Gas) Exposure Route If available, see ingredient data below\*\*\*

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

Oral Exposure Route If available, see data below\*\*\*  
Dermal Exposure Route If available, see data below  
Inhalation (Dust/Mist) Exposure Route If available, see data below  
Inhalation (Vapor) Exposure Route If available, see data below  
Inhalation (Gas) Exposure Route If available, see data below

**Aspiration toxicity**

If available, see data below\*\*\*

Kinematic viscosity Not applicable

**Product Skin Corrosion/Irritation Data**

This Product is by Weight 100% an Individual Pure Chemical Substance. If available, see ingredient data below.\*\*\*

**Ingredient Skin Corrosion/Irritation Data**

If available, see data below\*\*\*

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Manganese(II) sulfate*** (100%) CAS#: 7785-87-7	Standard Draize Test***	Rabbit***	500*** mg***	4*** hours***	Not corrosive or irritating to skin***	ECHA (The European Chemicals Agency)***

**Product Serious Eye Damage/Eye Irritation Data**

This Product is by Weight 100% an Individual Pure Chemical Substance. If available, see ingredient data below.\*\*\*

**Ingredient Eye Damage/Eye Irritation Data**

If available, see data below\*\*\*

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Manganese(II) sulfate*** (100%) CAS#: 7785-87-7	Standard Draize Test***	Rabbit***	80*** mg***	72*** hours***	Corrosive to eyes***	ECHA (The European Chemicals Agency)***

**Sensitization Information**

**Product Sensitization Data**

Skin Sensitization Exposure Route

This Product is by Weight 100% an Individual Pure Chemical Substance. If available, see ingredient data below.\*\*\*

Respiratory Sensitization Exposure Route

This Product is by Weight 100% an Individual Pure Chemical Substance. If available, see ingredient data below.\*\*\*

**Ingredient Sensitization Data**

Skin Sensitization Exposure Route

If available, see data below.

Respiratory Sensitization Exposure Route

If available, see data below.

**Chronic Toxicity Information**

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

Oral Exposure Route If available, see ingredient data below.\*\*\*  
Dermal Exposure Route If available, see ingredient data below.\*\*\*  
Inhalation (Dust/Mist) Exposure Route If available, see ingredient data below.\*\*\*



Inhalation (Vapor) Exposure Route  
 Inhalation (Gas) Exposure Route

If available, see ingredient data below.\*\*\*  
 If available, see ingredient data below.\*\*\*

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

Oral Exposure Route If available, see data below  
 Dermal Exposure Route If available, see data below  
 Inhalation (Dust/Mist) Exposure Route If available, see data below  
 Inhalation (Vapor) Exposure Route If available, see data below  
 Inhalation (Gas) Exposure Route If available, see data below

**Product Carcinogenicity Data**

Oral Exposure Route If available, see ingredient data below\*\*\*  
 Dermal Exposure Route If available, see ingredient data below\*\*\*  
 Inhalation (Dust/Mist) Exposure Route If available, see ingredient data below\*\*\*  
 Inhalation (Vapor) Exposure Route If available, see ingredient data below\*\*\*  
 Inhalation (Gas) Exposure Route If available, see ingredient data below\*\*\*

**Ingredient Carcinogenicity Data**

Chemical name	CAS No.	ACGIH	IARC	NTP	OSHA
Manganese(II) sulfate***	7785-87-7	-	-	-	-

**Legend**

ACGIH (American Conference of Governmental Industrial Hygienists)	Does not apply
IARC (International Agency for Research on Cancer)	Does not apply
NTP (National Toxicology Program)	Does not apply
OSHA (Occupational Safety and Health Administration of the US Department of Labor)	Does not apply

Oral Exposure Route If available, see data below  
 Dermal Exposure Route If available, see data below  
 Inhalation (Dust/Mist) Exposure Route If available, see data below  
 Inhalation (Vapor) Exposure Route If available, see data below  
 Inhalation (Gas) Exposure Route If available, see data below

**Product Germ Cell Mutagenicity *invitro* Data**

This Product is by Weight 100% an Individual Pure Chemical Substance. If available, see ingredient data below.\*\*\*

**Ingredient Germ Cell Mutagenicity *invitro* Data**

If available, see data below\*\*\*

Chemical name	Test	Cell Strain	Reported dose	Exposure time	Results	Key literature references and sources for data
Manganese(II) sulfate*** (100%) CAS#: 7785-87-7	Mutation in microorganisms***	Salmonella typhimurium***	1775*** nmol/tubes***	None reported	Positive test result for mutagenicity***	RTECS (Registry of Toxic Effects of Chemical Substances)***
Chemical name	Test	Cell Strain	Reported dose	Exposure time	Results	Key literature references and sources for data
Manganese(II) sulfate*** (100%) CAS#: 7785-87-7	DNA repair***	Bacillus subtilis***	50*** mmol/L***	None reported	Positive test result for mutagenicity***	RTECS (Registry of Toxic Effects of Chemical Substances)***

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

Oral Exposure Route If available, see ingredient data below\*\*\*  
 Dermal Exposure Route If available, see ingredient data below\*\*\*  
 Inhalation (Dust/Mist) Exposure Route If available, see ingredient data below\*\*\*  
 Inhalation (Vapor) Exposure Route If available, see ingredient data below\*\*\*

**Inhalation (Gas) Exposure Route**

If available, see ingredient data below\*\*\*

**Ingredient Germ Cell Mutagenicity *in vivo* Data**

**Oral Exposure Route**

If available, see data below

**Dermal Exposure Route**

If available, see data below

**Inhalation (Dust/Mist) Exposure Route**

If available, see data below

**Inhalation (Vapor) Exposure Route**

If available, see data below

**Inhalation (Gas) Exposure Route**

If available, see data below

**Product Reproductive Toxicity Data**

**Oral Exposure Route**

If available, see ingredient data below\*\*\*

**Dermal Exposure Route**

If available, see ingredient data below\*\*\*

**Inhalation (Dust/Mist) Exposure Route**

If available, see ingredient data below\*\*\*

**Inhalation (Vapor) Exposure Route**

If available, see ingredient data below\*\*\*

**Inhalation (Gas) Exposure Route**

If available, see ingredient data below\*\*\*

**Ingredient Reproductive Toxicity Data**

**Oral Exposure Route**

If available, see data below\*\*\*

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Manganese(II) sulfate*** (100%) CAS#: 7785-87-7	Mouse TD <sub>Lo</sub> ***	15000*** mg/kg***	3*** weeks***	<b>Effects on Fertility</b> Post-implantation mortality (e.g. dead and/or resorbed implants per total number of implants) <b>Effects on Newborn</b>  Growth statistics (e.g. % reduced weight gain)***	RTECS (Registry of Toxic Effects of Chemical Substances)***

**Inhalation (Dust/Mist) Exposure Route**

If available, see data below\*\*\*

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Manganese(II) sulfate*** (100%) CAS#: 7785-87-7	Rat TC <sub>Lo</sub> ***	0.0005*** mg/L***	None reported	<b>Effects on Newborn</b> Metabolic effects***	RTECS (Registry of Toxic Effects of Chemical Substances)***

**Inhalation (Vapor) Exposure Route**

If available, see data below

**Inhalation (Gas) Exposure Route**

If available, see data below

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

Toxic to aquatic life with long lasting effects\*\*\*

**Product Ecological Data**

This Product is by Weight 100% an Individual Pure Chemical Substance\*\*\*

**Aquatic toxicity**

**Fish**

If available, see ingredient data below\*\*\*

**Crustacea**

If available, see ingredient data below\*\*\*

**Algae**

If available, see ingredient data below\*\*\*

**Ingredient Ecological Data**

**Aquatic toxicity**

**Fish**

If available, see ingredient data below\*\*\*

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Manganese(II) sulfate***	96 hours***	<i>Oncorhynchus mykiss</i> ***	LC <sub>50</sub> ***	3.17*** mg/L***	PEEN (Pan European Ecological Network)***

(100%) CAS#: 7785-87-7					
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Crustacea <span style="float: right;">If available, see ingredient data below***</span>					
Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Manganese(II) sulfate*** (100%) CAS#: 7785-87-7	48 Hours***	<i>Daphnia magna</i> ***	EC <sub>50</sub> ***	5.7*** mg/L***	PEEN (Pan European Ecological Network)***

Algae If available, see ingredient data below\*\*\*

#### Other Information

#### Persistence and degradability

#### Product Biodegradability Data

This Product is by Weight 100% an Individual Pure Chemical Substance.\*\*\*

#### Ingredient Biodegradability Data

#### Bioaccumulation

#### Product Bioaccumulation Data

This Product is by Weight 100% an Individual Pure Chemical Substance.\*\*\*

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

log K<sub>ow</sub> ~ 0

#### Ingredient Bioaccumulation Data

#### Mobility

#### Soil Organic Carbon-Water Partition Coefficient

log K<sub>oc</sub> ~ 0

#### Water solubility

Water solubility classification	Water solubility	Water Solubility Temperature
Completely soluble	629000 mg/L	20 °C / 68 °F

#### Other adverse effects

No information available.

## 13. DISPOSAL CONSIDERATIONS

#### Waste treatment methods

#### Waste from residues/unused products

Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

#### Contaminated packaging

Do not reuse empty containers.

#### Special instructions for disposal

If permitted by regulation. 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 material to the drain. Flush system with plenty of water. Dispose of material in an E.P.A. approved hazardous waste facility.

## 14. TRANSPORT INFORMATION

### U.S. DOT

\*\*\*  
UN/ID no UN3077  
Proper shipping name Environmentally hazardous substances, solid, n.o.s.  
DOT Technical Name (Manganese sulfate)  
Hazard Class 9  
Packing Group III

### TDG

\*\*\*  
UN/ID no UN3077  
Proper shipping name Environmentally hazardous substances, solid, n.o.s.  
TDG Technical Name (Manganese sulfate)  
Hazard Class 9  
Packing Group III

### IATA

\*\*\*  
UN/ID no UN3077  
Proper shipping name Environmentally hazardous substances, solid, n.o.s.  
IATA Technical Name (Manganese sulfate)  
Hazard Class 9  
Packing Group III

### IMDG

\*\*\*  
UN/ID no UN3077  
Proper shipping name Environmentally hazardous substances, solid, n.o.s.  
IMDG Technical Name (Manganese sulfate)  
Hazard Class 9  
Packing Group III  
Marine pollutant This material meets the definition of a marine pollutant

**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

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**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 %
Manganese(II) sulfate*** (CAS #: 7785-87-7)	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)

#### **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**

Chemical name	New Jersey	Massachusetts	Pennsylvania
Manganese(II) sulfate*** 7785-87-7	X***	-	X***

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

Chemical name	FIFRA	FDA
Manganese(II) sulfate***	-	21 CFR 184.1461***

**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**

<b>NFPA</b>	<b>Health hazards - 3***</b>	<b>Flammability - 0</b>	<b>Instability - 0</b>	<b>Physical and Chemical Properties -</b>
<b>HMIS</b>	<b>Health hazards - 3***</b>	<b>Flammability - 0</b>	<b>Physical Hazards - 0</b>	<b>Personal protection - X</b> - See section 8 for more information

**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

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**Revision Note** None

**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**