



Be Right™

# SAFETY DATA SHEET

Issue Date 01-Feb-2020

Revision Date 08-Feb-2023

Version 5.7

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## 1. IDENTIFICATION

### Product identifier

**Product Name** NitraVer® 6 Nitrate Reagent

### Other means of identification

**Product Code(s)** 2107249

**Safety data sheet number** M00062

**UN/ID no** UN3077

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

**Recommended Use** Water Analysis. Determination of nitrate.

**Uses advised against** Consumer use.

**Restrictions on use** For Laboratory Use 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)

Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 1
Mutagenicity	Category 2
Carcinogenicity	Category 1B
Reproductive toxicity	Category 2
Specific target organ toxicity (repeated exposure)	Category 1
Aquatic Acute Toxicity	Category 1
Chronic aquatic toxicity	Category 1

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

Not applicable

#### **Label elements**

##### **Signal word**

Danger



#### Hazard statements

H315 - Causes skin irritation  
H318 - Causes serious eye damage  
H332 - Harmful if inhaled  
H341 - Suspected of causing genetic defects  
H350 - May cause cancer  
H361 - Suspected of damaging fertility or the unborn child  
H372 - Causes damage to organs through prolonged or repeated exposure  
H410 - Very toxic to aquatic life with long lasting effects

#### Precautionary statements

P271 - Use only outdoors or in a well-ventilated area  
P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing  
P280 - Wear protective gloves, protective clothing, eye protection, and face protection  
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water  
P332 + P313 - If skin irritation occurs: Get medical attention  
P362 - Take off contaminated clothing and wash before reuse  
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  
P201 - Obtain special instructions before use  
P308 + P313 - IF exposed or concerned: Get medical advice/attention  
P405 - Store locked up  
P501 - Dispose of contents/ container to an approved waste disposal plant  
P260 - Do not breathe dust/fume/gas/mist/vapors/spray  
P270 - Do not eat, drink or smoke when using this product  
P273 - Avoid release to the environment  
P391 - Collect spillage

#### Other Hazards Known

May be harmful if swallowed

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### Substance

Not applicable

#### Mixture

#### Chemical Family

Mixture.

#### Chemical nature

Mixture of inorganic salts, Mixture of inorganic compounds, Mixture of organic compounds.

Percent ranges are used where confidential product information is applicable.

Chemical name	CAS No	Percent Range	HMRIC #
Sodium sulfate	7757-82-6	40 - 50%	-
Glycine, N,N-1,2-cyclohexanediylbis[N-(carboxymethyl)-, trisodium salt	36679-96-6	20 - 30%	-
Potassium pyrosulfate	7790-62-7	<10%	-
Magnesium sulfate	7487-88-9	1 - 5%	-
Cadmium	7440-43-9	1 - 5%	-

Cuprate(2-), [[N,N-1,2-cyclohexanediylbis[N-(carboxymethyl)glycinato]](4-)-N,N,O,O,O N,ON]-, [OC-6-21-(trans)]-	19332-78-6	<0.1%	-
Ethanaminium, N,N,N-trimethyl-2-[(2-methyl-1-oxo-2-propenyl)oxy]-, chloride, polymer with 2-propenamide	35429-19-7	<0.01%	-

#### 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. Get medical attention immediately if symptoms occur. If breathing has stopped, give artificial respiration. Get medical attention immediately. If symptoms persist, call a physician.
<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. Get medical attention.
<b>Self-protection of the first aider</b>	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.

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

**Symptoms** Burning sensation. Coughing and/ or wheezing. Difficulty in breathing.

##### 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>	Cadmium oxide. Phosphorus oxides. Sulfur oxides. Nitrogen oxides (NOx).
<b>Special protective equipment for fire-fighters</b>	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** Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid generation of dust. Do not breathe dust.

**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.

**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** Take up mechanically, placing in appropriate containers for disposal.

**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. Remove contaminated clothing and shoes. Ensure adequate ventilation. Take off contaminated clothing and wash before reuse. Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid generation of dust.

**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
Cadmium CAS#: 7440-43-9	TWA: 0.01 mg/m <sup>3</sup> TWA: 0.002 mg/m <sup>3</sup> respirable particulate matter	TWA: 5 µg/m <sup>3</sup> (vacated) STEL: 0.3 ppm Ceiling: 0.3 mg/m <sup>3</sup> Ceiling: 0.6 mg/m <sup>3</sup>	IDLH: 9 mg/m <sup>3</sup> dust
Cuprate(2-), [[[N,N-1,2-cyclohexanediy]bis[N-(carboxymethyl)glycinato]](4-)-N,N,O,O,ON, ON]-, [OC-6-21-(trans)]-	TWA: 1 mg/m <sup>3</sup> Cu dust and mist	NDF	IDLH: 100 mg/m <sup>3</sup> Cu dust and mist TWA: 1 mg/m <sup>3</sup> Cu dust and mist

CAS#: 19332-78-6			
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**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** Tight sealing safety goggles.

**Skin and body protection** Wear suitable protective clothing. Long sleeved 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. Wash hands before breaks and immediately after handling the product. Avoid breathing dust/fume/gas/mist/vapors/spray.

**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**

<b>Physical state</b>	powder	Solid	<b>Color</b>	blue metallic
<b>Appearance</b>			<b>Odor threshold</b>	Not applicable
<b>Odor</b>	Odorless			

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>Molecular weight</b>	Not applicable	
<b>pH</b>	4.2	5% Solution
<b>Melting point / freezing point</b>	No data available	
<b>Initial boiling point and boiling range</b>	No data available	
<b>Evaporation rate</b>	Not applicable	
<b>Vapor pressure</b>	Not applicable	
<b>Relative vapor density</b>	No data available	
<b>Specific Gravity</b>	2.377	
<b>Partition coefficient</b>	log K <sub>ow</sub> ~ -2.94	
<b>Soil Organic Carbon-Water Partition Coefficient</b>	log K <sub>oc</sub> ~ -0.66	
<b>Autoignition temperature</b>	No data available	
<b>Decomposition temperature</b>	No data available	

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**Dynamic viscosity** Not applicable  
**Kinematic viscosity** Not applicable

### Solubility(ies)

#### Water solubility

Water solubility classification	Water solubility	Water Solubility Temperature
Slightly soluble	> 0.1 mg/L	25 °C / 77 °F

#### Solubility in other solvents

Chemical Name	Solubility classification	Solubility	Solubility Temperature
Acid	Slightly soluble	> 0.1 mg/L	25 °C / 77 °F

### Other information

#### Metal Corrosivity

**Steel Corrosion Rate** Not applicable  
**Aluminum Corrosion Rate** Not applicable

#### Volatile Organic Compounds (VOC) Content

Not applicable

Chemical name	CAS No	Volatile organic compounds (VOC) content	CAA (Clean Air Act)
Sodium sulfate	7757-82-6	No data available	-
Glycine, N,N-1,2-cyclohexanediylbis[N-(carboxymethyl)-, trisodium salt	36679-96-6	No data available	-
Potassium pyrosulfate	7790-62-7	No data available	-
Magnesium sulfate	7487-88-9	No data available	-
Cadmium	7440-43-9	Not applicable	-
Cuprate(2-), [[N,N-1,2-cyclohexanediylbis[N-(carboxymethyl)glycinato]](4-)-N,N,O,O,ON, ON]-, [OC-6-21-(trans)]-	19332-78-6	No data available	-
Ethanaminium, N,N,N-trimethyl-2-[(2-methyl-1-oxo-2-propenyl)oxy]-, chloride, polymer with 2-propenamide	35429-19-7	No data available	-

#### Explosive properties

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

#### Flammable properties

**Flash point** Not applicable

#### 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** None.

### Possibility of hazardous reactions

None under normal processing.

### Hazardous polymerization

Hazardous polymerization does not occur.

### Conditions to avoid

Excessive heat.

### Incompatible materials

Strong acids. Strong bases. Strong oxidizing agents.

### Hazardous decomposition products

Sulfur oxides. Phosphorus oxides. Cadmium oxide.

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

#### Product Information

##### **Inhalation**

May cause irritation of respiratory tract. Harmful by inhalation.

##### **Eye contact**

Severely irritating to eyes. Causes serious eye damage. May cause burns. May cause irreversible damage to eyes.

##### **Skin contact**

Causes skin irritation.

##### **Ingestion**

Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

#### **Symptoms**

Redness. Burning. May cause blindness. May cause redness and tearing of the eyes. Coughing and/ or wheezing.

### Acute toxicity

Harmful if inhaled

### Mixture

No data available.

### Ingredient Acute Toxicity Data

Test data reported below.

### Oral Exposure Route

Chemical name	Endpoint	Reported	Exposure	Toxicological effects	Key literature references and
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	type	dose	time		sources for data
Potassium pyrosulfate (<10%) CAS#: 7790-62-7	Rat LD <sub>50</sub>	2340 mg/kg	None reported	None reported	Vendor SDS
Cadmium (1 - 5%) CAS#: 7440-43-9	Rat LD <sub>50</sub>	225 mg/kg	None reported	None reported	ERMA

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

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Cadmium (1 - 5%) CAS#: 7440-43-9	Rat LC <sub>50</sub>	0.025 mg/L	None reported	None reported	LOLI

**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

ATEmix (oral)	4,397.70 mg/kg
ATEmix (dermal)	No information available
ATEmix (inhalation-dust/mist)	1.16 mg/l
ATEmix (inhalation-vapor)	No information available
ATEmix (inhalation-gas)	No information available

**Skin corrosion/irritation**

Classification based on data available for ingredients. Irritating to skin.

**Mixture**

No data available.

**Ingredient Skin Corrosion/Irritation Data**

Test data reported below.

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Sodium sulfate (40 - 50%) CAS#: 7757-82-6	Standard Draize Test	Rabbit	500 mg	4 hours	Not corrosive or irritating to skin	ECHA
Potassium pyrosulfate (<10%) CAS#: 7790-62-7	None reported	None reported	None reported	None reported	Corrosive to skin	Vendor SDS

**Serious eye damage/irritation**

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

**Mixture**

No data available.

**Ingredient Eye Damage/Eye Irritation Data**

Test data reported below.

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
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Sodium sulfate (40 - 50%) CAS#: 7757-82-6	Standard Draize Test	Rabbit	90 mg	24 hours	Not corrosive or irritating to eyes	ECHA
Potassium pyrosulfate (<10%) CAS#: 7790-62-7	None reported	None reported	None reported	None reported	Corrosive to eyes	Vendor SDS

**Respiratory or skin sensitization**

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

**Mixture**

No data available.

**Ingredient Sensitization Data**

Test data reported below.

**Skin Sensitization Exposure Route**

Chemical name	Test method	Species	Results	Key literature references and sources for data
Sodium sulfate (40 - 50%) CAS#: 7757-82-6	OECD Test No. 406: Skin Sensitization	Guinea pig	Not confirmed to be a skin sensitizer	HSDB

**STOT - single exposure**

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

**Mixture**

No data available.

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

Test data reported below.

**Oral Exposure Route**

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Cadmium (1 - 5%) CAS#: 7440-43-9	Rabbit TD <sub>Lo</sub>	70 mg/kg	None reported	None reported	RTECS

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

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Cadmium (1 - 5%) CAS#: 7440-43-9	Human LC <sub>Lo</sub>	39 mg/m <sup>3</sup>	20 minutes	<b>Vascular</b> Thrombosis distant from injection site <b>Lungs, Thorax, or Respiration</b> Respiratory depression	RTECS

**STOT - repeated exposure**

Causes damage to organs through prolonged or repeated exposure.

**Mixture**

No data available.

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

Test data reported below.

**Oral Exposure Route**

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Cadmium (1 - 5%) CAS#: 7440-43-9	Rat TD <sub>Lo</sub>	37.5 mg/kg	30 days	<b>Biochemical</b> Enzyme inhibition, induction, or change in blood or tissue levels (other enzymes) <b>Blood</b> Other changes <b>Kidney, Ureter, or Bladder</b> Other changes in urine composition	RTECS

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

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Cadmium (1 - 5%) CAS#: 7440-43-9	Man TD <sub>Lo</sub>	0.000088 mg/L	8.6 years	<b>Kidney, Ureter, or Bladder</b> Proteinuria	RTECS

**Carcinogenicity**

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

**Mixture**

No data available.

**Ingredient Carcinogenicity Data**

Test data reported below.

Chemical name	CAS No	ACGIH	IARC	NTP	OSHA
Sodium sulfate	7757-82-6	-	-	-	-
Glycine, N,N-1,2-cyclohexanediylbi s[N-(carboxymethyl)-, trisodium salt	36679-96-6	-	-	-	-
Potassium pyrosulfate	7790-62-7	-	-	-	-
Magnesium sulfate	7487-88-9	-	-	-	-
Cadmium Cuprate(2-),	7440-43-9 19332-78-6	A2	Group 1	Known	X
[[N,N-1,2-cyclohexanediylb is[N-(carboxymethyl)glycin ato]](4-)-N,N,O,O,ON,ON]-, [OC-6-21-(trans)]-		-	-	-	-
Ethanaminium, N,N,N-trimethyl-2-[(2-meth yl-1-oxo-2-propenyl)oxy]-, chloride, polymer with 2-propenamamide	35429-19-7	-	-	-	-

**Legend**

<b>ACGIH (American Conference of Governmental Industrial Hygienists)</b>	A2 - Suspected Human Carcinogen
<b>IARC (International Agency for Research on Cancer)</b>	Group 1 - Carcinogenic to Humans
<b>NTP (National Toxicology Program)</b>	Known - Known Carcinogen
<b>OSHA</b>	X - Present

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

Chemical name	Endpoint	Reported	Exposure	Toxicological effects	Key literature references and
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	type	dose	time		sources for data
Cadmium (1 - 5%) CAS#: 7440-43-9	Human	0.129 mg/L	20 years	Lungs, Thorax, or Respiration Tumors	RTECS

**Germ cell mutagenicity**

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

**Mixture invitro Data**

No data available.

**Substance invitro Data**

Test data reported below.

Chemical name	Test	Cell Strain	Reported dose	Exposure time	Results	Key literature references and sources for data
Cadmium (1 - 5%) CAS#: 7440-43-9	DNA damage	Human lymphocyte	0.25 mmol/L	1 hours	Positive test result for mutagenicity	RTECS

**Mixture invivo Data**

No data available.

**Substance invivo Data**

No data available.

**Reproductive toxicity**

Classification based on data available for ingredients. Contains a known or suspected reproductive toxin. The table below indicates ingredients above the cut-off threshold considered as relevant which are listed as reproductive toxins.

**Mixture**

No data available.

**Ingredient Reproductive Toxicity Data**

Test data reported below.

**Oral Exposure Route**

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Sodium sulfate (40 - 50%) CAS#: 7757-82-6	Mouse TD <sub>Lo</sub>	14000 mg/kg	4 days	<b>Effects on Newborn</b> Other neonatal measures or effects	RTECS
Cadmium (1 - 5%) CAS#: 7440-43-9	Rat TD <sub>Lo</sub>	23 mg/kg	22 days	<b>Specific Developmental Abnormalities</b> Blood and lymphatic systems (including spleen and marrow)	RTECS

**Aspiration hazard**

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

**12. ECOLOGICAL INFORMATION**

This product contains a chemical which is listed as a severe marine pollutant according to DOT.

**Ecotoxicity**

Very toxic to aquatic life with long lasting effects.

**Unknown aquatic toxicity**

0% of the mixture consists of components(s) of unknown hazards to the aquatic environment.

**Mixture**

**Aquatic Acute Toxicity**

No data available.

**Aquatic Chronic Toxicity**

No data available.

**Substance**

**Aquatic Acute Toxicity**

Test data reported below.

**Fish**

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Sodium sulfate (40 - 50%) CAS#: 7757-82-6	96 hours	None reported	LC <sub>50</sub>	56 mg/L	IUCLID
Glycine, N,N-1,2-cyclohexane diylbis[N-(carboxymethyl)-, trisodium salt (20 - 30%) CAS#: 36679-96-6	96 hours	None reported	LC <sub>50</sub>	356000 mg/L	ECOSARS
Potassium pyrosulfate (<10%) CAS#: 7790-62-7	96 hours	<i>Oncorhynchus mykiss</i>	LC <sub>50</sub>	420 mg/L	ERMA
Magnesium sulfate (1 - 5%) CAS#: 7487-88-9	96 hours	<i>Gambusia affinis</i>	LC <sub>50</sub>	15500 mg/L	IUCLID
Cadmium (1 - 5%) CAS#: 7440-43-9	96 hours	<i>Morone saxatilis</i>	LC <sub>50</sub>	0.019 mg/L	PEEN

**Crustacea**

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Sodium sulfate (40 - 50%) CAS#: 7757-82-6	48 Hours	<i>Daphnia magna</i>	EC <sub>50</sub>	3150 mg/L	IUCLID
Glycine, N,N-1,2-cyclohexane diylbis[N-(carboxymethyl)-, trisodium salt (20 - 30%) CAS#: 36679-96-6	48 Hours	None reported	EC <sub>50</sub>	26162 mg/L	ECOSARS
Potassium pyrosulfate (<10%) CAS#: 7790-62-7	48 Hours	<i>Daphnia magna</i>	EC <sub>50</sub>	140 mg/L	ERMA
Cadmium (1 - 5%) CAS#: 7440-43-9	48 Hours	None reported	EC <sub>50</sub>	0.58 mg/L	PEEN

**Algae**

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Glycine,	96 hours	None reported	EC <sub>50</sub>	56103 mg/L	ECOSARS

N,N-1,2-cyclohexane diylbis[N-(carboxymethyl)-, trisodium salt (20 - 30%) CAS#: 36679-96-6					
Magnesium sulfate (1 - 5%) CAS#: 7487-88-9	72 Hours	<i>Scenedesmus subspicatus</i>	EC <sub>50</sub>	2700 mg/L	IUCLID
Cadmium (1 - 5%) CAS#: 7440-43-9	72 Hours	None reported	EC <sub>50</sub>	0.132 mg/L	PEEN

**Aquatic Chronic Toxicity**

Test data reported below.

**Fish**

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Cadmium (1 - 5%) CAS#: 7440-43-9	7 days	<i>Epinephelus coioides</i>	NOEC	0.03333 mg/L	ECHA

**Crustacea**

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Cadmium (1 - 5%) CAS#: 7440-43-9	21 days	<i>Ctenodrilus serratus</i>	NOEC	0.001 mg/L	ECHA

**Algae**

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Cadmium (1 - 5%) CAS#: 7440-43-9	3 days	<i>Chaetoceros compressum</i>	EC <sub>10</sub>	0.00183 mg/L	ECHA

**Persistence and degradability**

**Mixture**

No data available.

**Bioaccumulation**

MATERIAL DOES NOT BIOACCUMULATE

**Mixture**

No data available.

**Partition coefficient**

log K<sub>ow</sub> ~ -2.94

**Mobility**

**Soil Organic Carbon-Water Partition Coefficient**

log K<sub>oc</sub> ~ -0.66

**Other adverse effects**

No information available

**13. DISPOSAL CONSIDERATIONS**

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### 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.

**US EPA Waste Number** D006

Chemical name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Cadmium 7440-43-9	-	Included in waste streams: F006, F039, K061, K069, K100	1.0 mg/L regulatory level	-

**Special instructions for disposal** Dispose of material in an E.P.A. approved hazardous waste facility.

## 14. TRANSPORT INFORMATION

### DOT

**UN/ID no** UN3077  
**Proper shipping name** Environmentally hazardous substance, solid, n.o.s.  
**DOT Technical Name** Cadmium  
**Transport hazard class(es)** 9  
**Packing Group** III  
**Reportable Quantity (RQ)** Cadmium: RQ kg= 131.59  
**Marine pollutant** This product contains a chemical which is listed as a severe marine pollutant according to DOT.  
**Emergency Response Guide Number** 171

### TDG

**UN/ID no** UN3077  
**Proper shipping name** Environmentally hazardous substance, solid, n.o.s.  
**TDG Technical Name** Cadmium  
**Transport hazard class(es)** 9  
**Packing Group** III  
**Marine pollutant** This product contains a chemical which is listed as a severe marine pollutant according to TDG.  
**Description** UN3077, Environmentally hazardous substance, solid, n.o.s. (Cadmium), 9, III

### IATA

**UN number or ID number** UN3077  
**Proper shipping name** Environmentally hazardous substance, solid, n.o.s.  
**IATA Technical Name** Cadmium  
**Transport hazard class(es)** 9  
**Packing group** III  
**ERG Code** 9L  
**Special precautions for user** A158, A179, A97

### IMDG

**UN number or ID number** UN3077  
**Proper shipping name** Environmentally hazardous substance, solid, n.o.s.  
**IMDG Technical Name** Cadmium  
**Transport hazard class(es)** 9  
**Packing Group** III  
**EmS-No** F-A, S-F  
**Special precautions for user** 274, 335, 966, 967  
**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** Does not comply  
**ENCS** Does not comply  
**IECSC** Complies  
**KECL - Existing substances** Complies  
**PICCS** Does not comply  
**TCSI** Complies  
**AICS** Does not comply  
**NZIoC** Does not comply

**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 %
Cadmium (CAS #: 7440-43-9)	0.1
Cuprate(2-), [[N,N-1,2-cyclohexanediy]bis[N-(carboxymethyl)glycinato]](4-)-N, N,O,O,ON,ON]-, [OC-6-21-(trans)]- (CAS #: 19332-78-6)	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 Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
EN / AGHS				

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Cadmium 7440-43-9	-	X	X	-
Cuprate(2-), [[N,N-1,2-cyclohexanediy]bis[N-(carboxymethyl)glycinato]](4-)-N,N,O,O,ON,ON]-, [OC-6-21-(trans)]-19332-78-6	-	X	-	-

**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)
Cadmium 7440-43-9	10 lb	-	RQ 10 lb final RQ RQ 4.54 kg final RQ

**US State Regulations**

**California Proposition 65**

This product contains the following Proposition 65 chemicals

Chemical name	California Proposition 65
Cadmium (CAS #: 7440-43-9)	Carcinogen Developmental Male Reproductive



**WARNING:** This product can expose you to chemicals including Cadmium, which is known to the State of California to cause cancer and birth defects or other reproductive harm.  
 For more information, go to <http://www.P65Warnings.ca.gov>

**IMERC:** Not applicable

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

This product may contain substances regulated by state right-to-know regulations.

Chemical name	New Jersey	Massachusetts	Pennsylvania
Sodium sulfate 7757-82-6	-	X	X
Cadmium 7440-43-9	X	X	X
Cuprate(2-), [[N,N-1,2-cyclohexanediy]bis[N-(carboxymethyl)glycinato]](4-)-N,N,O,O,ON,ON]-, [OC-6-21-(trans)]-19332-78-6	X	-	X

**U.S. EPA Label Information**

Chemical name	FIFRA	FDA
Sodium sulfate	-	21 CFR 186.1797
Magnesium sulfate	-	21 CFR 184.1443



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

**Special Comments**

None

**Additional information**

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

Chemical name	Global Automotive Declarable Substance List Classifications	Global Automotive Declarable Substance List Thersholds
Magnesium sulfate 7487-88-9	Declarable Substance (FI)	1 % 0.1 %
Cadmium 7440-43-9	Declarable Substance (LR) Prohibited Substance (LR)	0.01 %

**NFPA and HMIS Classifications**

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

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

ACGIH	ACGIH (American Conference of Governmental Industrial Hygienists)
ATSDR	ATSDR (Agency for Toxic Substances and Disease Registry)
CCRIS	CCRIS (Chemical Carcinogenesis Research Information System)
CDC	CDC (Center for Disease Control)
CEPA	CEPA (Canadian Environmental Protection Agency)
CICAD	CICAD (Concise International Chemical Assessment Documents)
ECHA	ECHA (The European Chemicals Agency)
EEA	EEA (European Environment Agency)
EPA	EPA (Environmental Protection Agency)
ERMA	ERMA (New Zealand's Environmental Risk Management Authority)
ECOSARS	Estimation through ECOSARS v1.11 part of the Estimation Programs Interface (EPI) Suite™
FDA	FDA (Food & Drug Administration)
GESTIS	GESTIS (Information System on Hazardous Substances of the German Social Accident Insurance)
HSDB	HSDB (Hazardous Substances Data Bank)
INERIS	INERIS (The National Industrial Environment and Risks Institute)
IPCS INCHEM	IPCS INCHEM (International Programme on Chemical Safety)
IUCLID	IUCLID (The International Uniform Chemical Information Database)
NITE	Japan National Institute of Technology and Evaluation (NITE)
NIH	NIH (National Institutes of Health)
NIOSH	NIOSH (National Institute for Occupational Safety and Health)
LOLI	LOLI (List of Lists - An International Chemical Regulatory Database)
NDF	no data
NICNAS	Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH IDLH	Immediately Dangerous to Life or Health
OSHA	OSHA (Occupational Safety and Health Administration of the US Department of Labor)
PEEN	PEEN (Pan European Ecological Network)
RTECS	RTECS (Registry of Toxic Effects of Chemical Substances)
SIDS	SIDS (Screening Information Dataset) for High Volume Chemicals
SYKE	The Finnish Environment Institute (SYKE)
USDA	USDA (United States Department of Agriculture)
USDC	USDC (United States Department of Commerce)
WHO	WHO (World Health Organization)

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

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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** 01-Feb-2020

**Revision Date** 08-Feb-2023

**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**