



**Be Right™**

# SAFETY DATA SHEET

Issue Date 08-Mar-2021

Revision Date  
10-Aug-2021

Version 4.6

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## 1. IDENTIFICATION

### Product identifier

Product Name NitraVer® 5 Nitrate Reagent

### Other means of identification

Product Code(s) 2106169

Safety data sheet number M00049

UN/ID no UN3288

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

Recommended Use Laboratory reagent. 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 - Oral	Category 4
Acute toxicity - Inhalation (Dusts/Mists)	Category 3
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Skin sensitization	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

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Signal word  
Danger



**Hazard statements**

H302 - Harmful if swallowed  
H315 - Causes skin irritation  
H317 - May cause an allergic skin reaction  
H319 - Causes serious eye irritation  
H331 - Toxic 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  
P311 - Call a POISON CENTER or doctor/physician  
P403 + P233 - Store in a well-ventilated place. Keep container tightly closed  
P405 - Store locked up  
P501 - Dispose of contents/ container to an approved waste disposal plant  
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water  
P362 - Take off contaminated clothing and wash before reuse  
P280 - Wear protective gloves, protective clothing, eye protection, and 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  
P337 + P313 - If eye irritation persists: Get medical attention  
P272 - Contaminated work clothing should not be allowed out of the workplace  
P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention  
P363 - Wash contaminated clothing before reuse  
P201 - Obtain special instructions before use  
P308 + P313 - IF exposed or concerned: Get medical advice/attention  
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  
P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell  
P330 - Rinse mouth

**Other Hazards Known**

None

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

**Substance**

Not applicable

**Mixture**

Chemical Family

Mixture.



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

Percent ranges are used where confidential product information is applicable.

Chemical name	CAS No	Percent Range	HMRIC #
Phosphoric acid, potassium salt (1:1)	7778-77-0	30 - 40%	-
Benzenesulfonic acid, 4-amino-	121-57-3	20 - 30%	-
Benzoic acid, 2,5-dihydroxy-	490-79-9	20 - 30%	-
Magnesium sulfate	7487-88-9	<10%	-
Cadmium	7440-43-9	3 - 7%	-
Copper, [propanedioato(2-)-O,O]-	7268-92-0	<1%	-
2-Propenamide, homopolymer	9003-05-8	<0.1%	-

#### 4. FIRST AID MEASURES

##### Description of first aid measures

General advice	Show this safety data sheet to the doctor in attendance. IF exposed or concerned: Get medical advice/attention.
Inhalation	Remove to fresh air. Get medical attention immediately if symptoms occur. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not breathe dust. 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.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists. Do not rub affected area.
Skin contact	May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a physician. Wash off immediately with soap and plenty of water for at least 15 minutes.
Ingestion	Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.
Self-protection of the first aider	Avoid contact with skin, eyes or clothing. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Do not breathe dust. 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.

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

Symptoms	Itching. Rashes. Hives. Burning sensation. Coughing and/ or wheezing. Difficulty in breathing.
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##### Indication of any immediate medical attention and special treatment needed

Note to physicians	May cause sensitization in susceptible persons. Treat symptomatically.
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#### 5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
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<b>Unsuitable Extinguishing Media</b>	Caution: Use of water spray when fighting fire may be inefficient.
<b>Specific hazards arising from the chemical</b>	Product is or contains a sensitizer. May cause sensitization by skin contact.
<b>Hazardous combustion products</b>	Cadmium oxide. Nitrogen oxides. Sulfur oxides. Phosphorus oxides. Carbon monoxide, Carbon dioxide.
<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

<b>U.S. Notice</b>	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.
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### Personal precautions, protective equipment and emergency procedures

<b>Personal precautions</b>	Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Avoid generation of dust. Do not breathe dust.
<b>Other Information</b>	Refer to protective measures listed in Sections 7 and 8.

### Environmental precautions

<b>Environmental precautions</b>	Prevent further leakage or spillage if safe to do so.
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### Methods and material for containment and cleaning up

<b>Methods for containment</b>	Prevent further leakage or spillage if safe to do so.
<b>Methods for cleaning up</b>	Pick up and transfer to properly labeled containers.
<b>Prevention of secondary hazards</b>	Clean contaminated objects and areas thoroughly observing environmental regulations.
<b>Reference to other sections</b>	See section 8 for more information. See section 13 for more information.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

<b>Advice on safe handling</b>	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. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Remove contaminated clothing and shoes. Do not breathe dust. Avoid generation of dust. Handle product only in closed system or provide appropriate exhaust ventilation.
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### Conditions for safe storage, including any incompatibilities

<b>Storage Conditions</b>	Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Store locked up.
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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: 0.1 mg/m <sup>3</sup> TWA: 0.2 mg/m <sup>3</sup> 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
Copper, [propanedioato(2-)-O,O]- CAS#: 7268-92-0	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

### 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

Wear safety glasses with side shields (or goggles). If splashes are likely to occur, wear safety glasses with side-shields.

#### Skin and body protection

Wear suitable protective clothing. Long sleeved clothing.

#### General Hygiene Considerations

Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product. Wear suitable gloves and eye/face protection. Avoid contact with skin, eyes or clothing. Do not breathe dust. Take off contaminated clothing and wash before reuse. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended.

#### 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	Color	Gray
Odor	Odorless	Odor threshold	Not applicable

### Property

### Values

### Remarks • Method

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Molecular weight	Not applicable	
pH	2.8	5% @ 20°C
Melting point/freezing point	180 °C / 356 °F	
Boiling point / boiling range	No data available	
Evaporation rate	Not applicable	
Vapor pressure	Not applicable	
Relative vapor density	No data available	
Specific gravity (water = 1 / air = 1)	2.0	
Partition Coefficient (n-octanol/water)	log K <sub>ow</sub> ~ 0.41	
Soil Organic Carbon-Water Partition Coefficient	log K <sub>oc</sub> ~ 0.34	
Autoignition temperature	No data available	
Decomposition temperature	No data available	
Dynamic viscosity	Not applicable	
Kinematic viscosity	Not applicable	

#### 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

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)
Phosphoric acid, potassium salt (1:1)	7778-77-0	No data available	-
Benzenesulfonic acid, 4-amino-	121-57-3	No data available	X
Benzoic acid, 2,5-dihydroxy-	490-79-9	No data available	-
Magnesium sulfate	7487-88-9	No data available	-
Cadmium	7440-43-9	Not applicable	-
Copper, [propanedioato(2-)-O,O]-	7268-92-0	No data available	-
2-Propanamide, homopolymer	9003-05-8	No data available	-

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#### Explosive properties

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

#### Flammable properties

Flash point	Not applicable
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#### 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

Phosphorus oxides. Sulfur oxides. Carbon dioxide. Carbon monoxide. Nitrogen oxides.

## 11. TOXICOLOGICAL INFORMATION

#### Information on likely routes of exposure

#### Product Information

Inhalation	May cause irritation of respiratory tract. Toxic by inhalation.
Eye contact	Irritating to eyes. Causes serious eye irritation.
Skin contact	May cause sensitization by skin contact. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. Causes skin irritation.



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#### Ingestion

Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Harmful if swallowed.

#### Symptoms

Itching. Rashes. Hives. Redness. May cause redness and tearing of the eyes. Coughing and/ or wheezing. Difficulty in breathing.

#### Acute toxicity

Based on available data, the classification criteria are not met

#### Product Acute Toxicity Data

Test data reported below.

#### Oral Exposure Route

Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Rat LD <sub>50</sub>	1500 mg/kg	None reported	<b>Behavioral</b> Decreased locomotor activity <b>Lungs, Thorax, or Respiration</b> Respiratory depression <b>Gastrointestinal</b> Diarrhea Piloerection <b>Chronic</b> Death	Outside testing

#### Inhalation (Gas) Exposure Route

#### Ingredient Acute Toxicity Data

No data available.

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Phosphoric acid, potassium salt (1:1) (30 - 40%) CAS#: 7778-77-0	LD <sub>50</sub> Rat	3200 mg/kg	None reported	None reported	LOLI
Benzenesulfonic acid, 4-amino- (20 - 30%) CAS#: 121-57-3	Rat LD <sub>50</sub>	12300 mg/kg	None reported	None reported	IUCLID (The International Uniform Chemical Information Database)
Benzoic acid, 2,5-dihydroxy- (20 - 30%) CAS#: 490-79-9	Rat LD <sub>50</sub>	800 mg/kg	None reported	None reported	RTECS (Registry of Toxic Effects of Chemical Substances)
Cadmium (3 - 7%) CAS#: 7440-43-9	Rat LD <sub>50</sub>	225 mg/kg	None reported	None reported	ERMA (New Zealand's Environmental Risk Management Authority)
Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Cadmium (3 - 7%) CAS#: 7440-43-9	Rat LC <sub>50</sub>	0.025 mg/L	None reported	None reported	LOLI

#### Unknown Acute Toxicity

5.59813% of the mixture consists of ingredient(s) of unknown toxicity.

#### Acute Toxicity Estimations (ATE)

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

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ATEmix (oral)	No information available
ATEmix (dermal)	No information available
ATEmix (inhalation-dust/mist)	0.89 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.

**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
Benzenesulfonic acid, 4-amino- (20 - 30%) CAS#: 121-57-3	Standard Draize Test	Rabbit	500 mg	24 hours	Mild skin irritant	RTECS (Registry of Toxic Effects of Chemical Substances)

**Serious eye damage/irritation**

Classification based on data available for ingredients. Irritating 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
Benzenesulfonic acid, 4-amino- (20 - 30%) CAS#: 121-57-3	Standard Draize Test	Rabbit	100 mg	24 hours	Eye irritant	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
Benzenesulfonic acid, 4-amino- (20 - 30%) CAS#: 121-57-3	OECD Test No. 406: Skin Sensitization	Guinea pig	Confirmed to be a skin sensitizer	IUCLID (The International Uniform Chemical Information Database)

**STOT - single exposure**

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

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

No data available.

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#### 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
Cadmium (3 - 7%) CAS#: 7440-43-9	Rabbit TD <sub>Lo</sub>	70 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
Cadmium (3 - 7%) CAS#: 7440-43-9	Human LC <sub>Lo</sub>	39 mg/m <sup>3</sup>	20 minutes	<b>Vascular</b> Thromobosis distant from injection site <b>Lungs, Thorax, or Respiration</b> Respiratory depression	RTECS (Registry of Toxic Effects of Chemical Substances)

#### STOT - repeated exposure

Causes damage to organs through prolonged or repeated exposure.

#### 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
Cadmium (3 - 7%) 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 (Registry of Toxic Effects of Chemical Substances)
Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Cadmium (3 - 7%) CAS#: 7440-43-9	Man TD <sub>Lo</sub>	0.000088 mg/L	8.6 years	<b>Kidney, Ureter, or Bladder</b> Proteinuria	RTECS (Registry of Toxic Effects of Chemical Substances)

#### 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.

Chemical name	CAS No	ACGIH	IARC	NTP	OSHA
Phosphoric acid, potassium salt (1:1)	7778-77-0	-	-	-	-
Benzenesulfonic acid, 4-amino-	121-57-3	-	-	-	-
Benzoic acid, 2,5-dihydroxy-	490-79-9	-	-	-	-
Magnesium sulfate	7487-88-9	-	-	-	-
Cadmium	7440-43-9	A2	Group 1	Known	X
Copper,	7268-92-0	-	-	-	-



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[propanedioato(2-)-O,O]-					
2-Propenamide, homopolymer	9003-05-8	-	-	-	-

#### 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 (Occupational Safety and Health Administration of the US Department of Labor)</b>	X - Present

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Cadmium (3 - 7%) CAS#: 7440-43-9	Human	0.129 mg/L	20 years	Lungs, Thorax, or Respiration Tumors	RTECS (Registry of Toxic Effects of Chemical Substances)

#### Germ cell mutagenicity

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

#### Product Germ Cell Mutagenicity invitro Data

No data available.

#### Ingredient Germ Cell Mutagenicity invitro Data

No data available.

Chemical name	Test	Cell Strain	Reported dose	Exposure time	Results	Key literature references and sources for data
Benzenesulfonic acid, 4-amino- (20 - 30%) CAS#: 121-57-3	Mutation in microorganisms	<i>Salmonella typhimurium</i>	None reported	None reported	Negative test result for mutagenicity	IUCLID (The International Uniform Chemical Information Database)
Benzoic acid, 2,5-dihydroxy- (20 - 30%) CAS#: 490-79-9	DNA inhibition	Human lymphocyte	1 mmol/L	None reported	Positive test result for mutagenicity	RTECS (Registry of Toxic Effects of Chemical Substances)
Cadmium (3 - 7%) CAS#: 7440-43-9	DNA damage	Human lymphocyte	0.25 mmol/L	1 hours	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.

#### 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.

#### Product Reproductive Toxicity Data

No data available.

#### Ingredient Reproductive Toxicity Data

No data available.

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
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Cadmium (3 - 7%) CAS#: 7440-43-9	Rat TDLo	23 mg/kg	22 days	<b>Specific Developmental Abnormalities</b> Blood and lymphatic systems (including spleen and marrow)	RTECS (Registry of Toxic Effects of Chemical Substances)
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**Aspiration hazard**

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

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity**

Very toxic to aquatic life with long lasting effects.

**Unknown aquatic toxicity**

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

**Product Ecological Data**

**Aquatic Acute Toxicity**

No data available.

**Aquatic Chronic Toxicity**

No data available.

**Ingredient Ecological Data**

**Aquatic Acute Toxicity**

No data available.

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Benzenesulfonic acid, 4-amino- (20 - 30%) CAS#: 121-57-3	96 hours	<i>Pimephales promelas</i>	LC <sub>50</sub>	100.4 mg/L	IUCLID (The International Uniform Chemical Information Database)
Benzoic acid, 2,5-dihydroxy- (20 - 30%) CAS#: 490-79-9	96 hours	None reported	LC <sub>50</sub>	1140 mg/L	Estimation through ECOSARS v1.11 part of the Estimation Programs Interface (EPI) Suite™
Magnesium sulfate (<10%) CAS#: 7487-88-9	96 hours	<i>Gambusia affinis</i>	LC <sub>50</sub>	15500 mg/L	IUCLID (The International Uniform Chemical Information Database)
Cadmium (3 - 7%) CAS#: 7440-43-9	96 hours	<i>Morone saxatilis</i>	LC <sub>50</sub>	0.019 mg/L	PEEN (Pan European Ecological Network)
Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Benzenesulfonic acid, 4-amino- (20 - 30%) CAS#: 121-57-3	48 Hours	<i>Daphnia magna</i>	EC <sub>50</sub>	85.66 mg/L	IUCLID (The International Uniform Chemical Information Database)
Benzoic acid, 2,5-dihydroxy- (20 - 30%) CAS#: 490-79-9	48 Hours	None reported	EC <sub>50</sub>	9811 mg/L	Estimation through ECOSARS v1.11 part of the Estimation Programs Interface (EPI) Suite™
Cadmium (3 - 7%) CAS#: 7440-43-9	48 Hours	None reported	EC <sub>50</sub>	0.58 mg/L	PEEN (Pan European Ecological Network)
2-Propenamide, homopolymer (<0.1%)	48 Hours	<i>Daphnia pulex</i>	LC <sub>50</sub>	0.08 mg/L	CEPA (Canadian Environmental Protection Agency)

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CAS#: 9003-05-8					
Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Benzenesulfonic acid, 4-amino- (20 - 30%) CAS#: 121-57-3	72 Hours	<i>Scenedesmus subspicatus</i>	EC <sub>50</sub>	91 mg/L	IUCLID (The International Uniform Chemical Information Database)
Benzoic acid, 2,5-dihydroxy- (20 - 30%) CAS#: 490-79-9	96 hours	None reported	EC <sub>50</sub>	388 mg/L	Estimation through ECOSARS v1.11 part of the Estimation Programs Interface (EPI) Suite™
Magnesium sulfate (<10%) CAS#: 7487-88-9	72 Hours	<i>Scenedesmus subspicatus</i>	EC <sub>50</sub>	2700 mg/L	IUCLID (The International Uniform Chemical Information Database)
Cadmium (3 - 7%) CAS#: 7440-43-9	72 Hours	None reported	EC <sub>50</sub>	0.132 mg/L	PEEN (Pan European Ecological Network)

#### Aquatic Chronic Toxicity

No data available.

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Cadmium (3 - 7%) CAS#: 7440-43-9	7 days	<i>Epinephelus coioides</i>	NOEC	0.03333 mg/L	ECHA (The European Chemicals Agency)
Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Cadmium (3 - 7%) CAS#: 7440-43-9	21 days	<i>Ctenodrilus serratus</i>	NOEC	0.001 mg/L	ECHA (The European Chemicals Agency)
Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Cadmium (3 - 7%) CAS#: 7440-43-9	3 days	<i>Chaetoceros compressum</i>	EC <sub>10</sub>	0.00183 mg/L	ECHA (The European Chemicals Agency)

#### Persistence and degradability

##### Product Biodegradability Data

No data available.

##### Bioaccumulation

MATERIAL DOES NOT BIOACCUMULATE

##### Product Bioaccumulation Data

No data available.

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

log K<sub>ow</sub> ~ 0.41

##### Mobility

##### Soil Organic Carbon-Water Partition Coefficient

log K<sub>oc</sub> ~ 0.34

##### Other adverse effects

No information available

Chemical name	EU - Endocrine Disruptors Candidate List	EU - Endocrine Disruptors - Evaluated Substances	Endocrine disrupting potential
Benzoic acid, 2,5-dihydroxy- (20 - 30%) CAS#: 490-79-9	Group III Chemical	-	-



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### 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.

**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 UN3288  
Proper shipping name Toxic solid, inorganic, n.o.s.  
DOT Technical Name Cadmium  
Transport hazard class(es) 6.1  
Packing Group III  
Description UN3288, Toxic solid, inorganic, n.o.s. (Cadmium), 6.1, III  
Emergency Response Guide Number 151

#### TDG

UN/ID no UN3288  
Proper shipping name Toxic solid, inorganic, n.o.s.  
TDG Technical Name Cadmium  
Transport hazard class(es) 6.1  
Packing Group III  
Description UN3288, Toxic solid, inorganic, n.o.s. (Cadmium), 6.1, III

#### IATA

UN number or ID number UN3288  
Proper shipping name Toxic solid, inorganic, n.o.s.  
IATA Technical Name Cadmium  
Transport hazard class(es) 6.1  
Packing group III  
ERG Code 6L  
Special precautions for user A3,A5

#### IMDG

UN number or ID number UN3288  
Proper shipping name Toxic solid, inorganic, n.o.s.  
IMDG Technical Name Cadmium  
Transport hazard class(es) 6.1  
Packing Group III  
EmS-No F-A, S-A  
Special precautions for user 223, 274

**Note:** No special precautions necessary.

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#### 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 - Existing substances Complies  
PICCS Does not comply  
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

#### 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
Copper, [propanedioato(2-)-O,O]- (CAS #: 7268-92-0)	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
Cadmium 7440-43-9	-	X	X	-
Copper,	-	X	-	-

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[propanedioato(2-)-O,O]- 7268-92-0				
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#### **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 does not contain any substances regulated by state right-to-know regulations.

Chemical name	New Jersey	Massachusetts	Pennsylvania
Cadmium 7440-43-9	X	X	X
Copper, [propanedioato(2-)-O,O]- 7268-92-0	X	-	X

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

Chemical name	FIFRA	FDA
Phosphoric acid, potassium salt (1:1)	180.0920	-
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 Thresholds
Magnesium sulfate 7487-88-9	Declarable Substance (FI)	0.1 %



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Cadmium 7440-43-9	Declarable Substance (LR) Prohibited Substance (LR)	0 % 0.01 %
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### 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 - I</b>

**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** 08-Mar-2021

Revision Date 10-Aug-2021

<b>Revision Note</b>	SDS sections updated 2
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## 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**