



Be Right™

SAFETY DATA SHEET

Issue Date 06-Oct-2018

Revision Date 08-Oct-2018

Version 1.2

1. Identification

Product identifier

Product Name NitraVer® 6 Nitrate Reagent

Other means of identification

Product Code(s) 1412099

Recommended use of the chemical and restrictions on use

Recommended Use Laboratory reagent. Determination of nitrate.

Restrictions on use For Laboratory Use Only.

Uses advised against Consumer use

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

Emergency Telephone +1(303) 623-5716 - 24 Hour Service +1(515)232-2533 - 8am - 4pm CST

2. Hazards identification

Classification

Acute toxicity - Oral	Category 5 - (H303)
Acute toxicity - Inhalation (Dusts/Mists)	Category 4 - (H332)
Skin corrosion/irritation	Category 2 - (H315)
Serious eye damage/eye irritation	Category 1 - (H318)
Germ cell mutagenicity	Category 2 - (H341)
Carcinogenicity	Category 1B - (H350)
Reproductive toxicity	Category 2 - (H361)
Specific target organ toxicity (repeated exposure)	Category 1 - (H372)
Acute aquatic toxicity	Category 1 - (H400)
Chronic aquatic toxicity	Category 1 - (H410)

Label elements

Signal word - Danger

Hazard statements

H303 - May be harmful if swallowed

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



Exclamation mark
 Health hazard
 Corrosion
 Environment

Precautionary statements

P271 - Use only outdoors or in a well-ventilated area
 P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing
 P280 - Wear protective gloves/protective clothing/eye protection/face protection
 P302 + P352 - IF ON SKIN: Wash with plenty of water and soap
 P332 + P313 - If skin irritation occurs: Get medical advice/attention
 P362 + P364 - Take off contaminated clothing and wash it 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
 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

Not applicable

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.

Chemical name	CAS No.	Synonyms	Percent Range
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Sodium sulfate	7757-82-6	No information available	40 - 50%
Glycine, N,N-1,2-cyclohexanediylbis[N-(carb oxymethyl)-, trisodium salt	36679-96-6	No information available	20 - 30%
Phosphoric acid, potassium salt (1:1)	7778-77-0	No information available	7 - 13%
Potassium pyrosulfate	7790-62-7	No information available	5 - 10%
Cadmium	7440-43-9	None	1 - 5%
Cuprate(2-), [[N,N-1,2-cyclohexanediylbis[N-(car boxymethyl)glycinato]](4-)-N,N,O,O, ON,ON]-, [OC-6-21-(trans)]-	19332-78-6	No information available	<1%
2-Propenamide, homopolymer	9003-05-8	Polyacrylamide	<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. If symptoms persist, call a physician.
Eye contact	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.
Skin contact	Wash off immediately with soap and plenty of water for at least 15 minutes. Get medical attention if irritation develops and persists.
Ingestion	Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Get medical attention.
Self-protection of the first aider	Avoid contact with skin, eyes or clothing. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid breathing dust/fume/gas/mist/vapors/spray. Use personal protective equipment as required. See section 8 for more information.

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

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	CAUTION: Use of water spray when fighting fire may be inefficient.
Specific hazards arising from the chemical	No information available.

Hazardous combustion products Cadmium oxide. Phosphorus oxides. Sulfur oxides.

Explosion data

Sensitivity to mechanical impact None.
Sensitivity to static discharge None.

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

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid contact with skin, eyes or clothing. 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 Pick up and transfer to properly labeled containers.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

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.

8. Exposure controls/personal protection

Control parameters

Exposure Limits Based on NOM-010-STPS-2014.

Chemical name	TWA	STEL	Ceiling Limit Value
Cadmium 7440-43-9	0.01 mg/m ³ 0.002 mg/m ³	-	-

Appropriate engineering controls

Engineering controls Showers
 Eyewash stations
 Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Tight sealing safety goggles.

Hand protection Wear suitable gloves. Impervious gloves.

Skin and body protection Wear suitable protective clothing. Long sleeved clothing.

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.

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.

9. Physical and chemical properties
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Information on basic physical and chemical properties

Physical state		Solid		
Appearance	powder		Color	blue metallic
Odor	None		Odor threshold	Not applicable

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
Molecular weight	Not applicable	
pH	4.2	5% Solution
Melting point/freezing point	No data available	
Boiling point / boiling range	No data available	
Evaporation rate	Not applicable	
Vapor pressure	Not applicable	
Vapor density (air = 1)	Not applicable	
Specific gravity (water = 1 / air = 1)	2.377	
Partition Coefficient (n-octanol/water)	log K _{ow} ~ -2.94	
Soil Organic Carbon-Water Partition Coefficient	log K _{oc} ~ -0.66	
Autoignition temperature	No data available	
Decomposition temperature	No data available	
Dynamic viscosity	Not applicable	
Kinematic viscosity	Not applicable	
<u>Solubility(ies)</u>		

Water solubility

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

Solubility in other solvents

<u>Chemical Name</u>	<u>Solubility classification</u>	<u>Solubility</u>	<u>Solubility Temperature</u>
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-cyclohexanediybis[N-(carboxymethyl)-, trisodium salt	36679-96-6	No data available	-
Phosphoric acid, potassium salt (1:1)	7778-77-0	No data available	-
Potassium pyrosulfate	7790-62-7	No data available	-
Cadmium	7440-43-9	Not applicable	-
Cuprate(2-), [[N,N-1,2-cyclohexanediybis[N-(carboxymethyl)glycinato]](4-)-N,N,O,O,ON, ON]-, [OC-6-21-(trans)]-	19332-78-6	No data available	-
2-Propenamide, homopolymer	9003-05-8	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

Particle Size

No information available

Particle Size Distribution

No information available

10. Stability and reactivity

Reactivity

No information available.

Chemical stability	Stable under normal conditions.
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

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 related to the physical, chemical and toxicological characteristics

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

Aggravated Medical Conditions	Eye disorders. Skin disorders. Respiratory disorders. Blood disorders. Kidney disorders. Prostate. lungs.
Toxicologically synergistic products	None known.
Toxicokinetics, metabolism and distribution	See ingredients information below.

Chemical name	Toxicokinetics, metabolism and distribution
2-Propenamide, homopolymer (<0.1%) CAS#: 9003-05-8	Polyacrylamide is not toxic; however, unpolymerized acrylamide, which is a neurotoxin, can be present in very small amount in the polymerized acrylamide. Therefore, it is recommended to handle it with caution.

Product Acute Toxicity Data

Oral Exposure Route	No data available
Dermal Exposure Route	No data available
Inhalation (Dust/Mist) Exposure Route	No data available
Inhalation (Vapor) Exposure Route	No data available
Inhalation (Gas) Exposure Route	No data available

Numerical measures of toxicity

Unknown acute toxicity 0 % of the mixture consists of ingredient(s) of unknown toxicity
 0 % of the mixture consists of ingredient(s) of unknown acute oral toxicity
 0 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity

0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)
 0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)
 0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)

Acute Toxicity Estimations (ATE)

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

ATEmix (oral) 3,961.00 mg/kg
 ATEmix (dermal) No information available
 ATEmix (inhalation-dust/mist) 1.45 mg/l
 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
Phosphoric acid, potassium salt (1:1) (7 - 13%) CAS#: 7778-77-0	Mouse LD ₅₀	1700 mg/kg	None reported		IUCLID (The International Uniform Chemical Information Database)
Potassium pyrosulfate (5 - 10%) CAS#: 7790-62-7	Rat LD ₅₀	2340 mg/kg	None reported		Vendor SDS
Cadmium (1 - 5%) CAS#: 7440-43-9	Rat LD ₅₀	225 mg/kg	None reported	None reported	ERMA (New Zealand's Environmental Risk Management Authority)

Dermal Exposure Route

If available, see data below

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
Cadmium (1 - 5%) CAS#: 7440-43-9	Rat LC ₅₀	0.0125 mg/L	4 hours	None reported	ERMA (New Zealand's Environmental Risk Management Authority)

Inhalation (Vapor) Exposure Route

If available, see data below

Inhalation (Gas) Exposure Route

If available, see data below

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

No data available

Dermal Exposure Route

No data available

Inhalation (Dust/Mist) Exposure Route

No data available

Inhalation (Vapor) Exposure Route

No data available

Inhalation (Gas) Exposure Route

No data available

Ingredient Specific Target Organ Toxicity Single Exposure 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
Cadmium (1 - 5%) CAS#: 7440-43-9	Rabbit TD _{Lo}	70 mg/kg	None reported	None reported	RTECS (Registry of Toxic Effects of Chemical Substances)

Dermal Exposure Route

If available, see data below

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
Cadmium (1 - 5%) CAS#: 7440-43-9	Human LC _{Lo}	39 mg/m ³	20 minutes	Vascular Thrombosis distant from injection site Lungs, Thorax, or Respiration Respiratory depression	RTECS (Registry of Toxic Effects of Chemical Substances)

Inhalation (Vapor) Exposure Route
Inhalation (Gas) Exposure RouteIf available, see data below
If available, see data below**Aspiration toxicity**

If available, see data below

Kinematic viscosity

Not applicable

Product Skin Corrosion/Irritation Data

No data available.

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
Sodium sulfate (40 - 50%) CAS#: 7757-82-6	Standard Draize Test	Rabbit	500 mg	4 hours	Not corrosive or irritating to skin	ECHA (The European Chemicals Agency)
Potassium pyrosulfate (5 - 10%) CAS#: 7790-62-7	None reported	None reported	None reported	None reported	Corrosive to skin	Vendor SDS

Product Serious Eye Damage/Eye Irritation Data

No data available.

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
Sodium sulfate (40 - 50%) CAS#: 7757-82-6	Standard Draize Test	Rabbit	90 mg	24 hours	Not corrosive or irritating to eyes	ECHA (The European Chemicals Agency)
Potassium pyrosulfate (5 - 10%) CAS#: 7790-62-7	None reported	None reported	None reported	None reported	Corrosive to eyes	Vendor SDS

Sensitization Information**Product Sensitization Data****Skin Sensitization Exposure Route**

No data available.

Respiratory Sensitization Exposure Route

No data available.

Ingredient Sensitization Data**Skin Sensitization Exposure Route**

If available, see data below.

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 (Hazardous Substances Data Bank)

Respiratory Sensitization Exposure Route

If available, see data below.

Chronic Toxicity Information**Product Specific Target Organ Toxicity Repeat Dose Data****Oral Exposure Route**

No data available.

Dermal Exposure Route

No data available.

Inhalation (Dust/Mist) Exposure Route

No data available.

Inhalation (Vapor) Exposure Route

No data available.

Inhalation (Gas) Exposure Route

No data available.

Ingredient Specific Target Organ Toxicity Repeat Exposure 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
Cadmium (1 - 5%) CAS#: 7440-43-9	Rat TD _{Lo}	37.5 mg/kg	30 days	Biochemical Enzyme inhibition, induction, or change in blood or tissue levels (other enzymes) Blood Other changes Kidney, Ureter, or Bladder 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 (1 - 5%) CAS#: 7440-43-9	Rat LOAEL	0.025 mg/m ³	90 days	Lungs, Thorax, or Respiration Structural or functional change in trachea or bronchi	ECHA (The European Chemicals Agency)

Dermal Exposure Route

If available, see data below

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
Cadmium (1 - 5%) CAS#: 7440-43-9	Man TD _{Lo}	0.000088 mg/L	8.6 years	Kidney, Ureter, or Bladder Proteinuria	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

Product Carcinogenicity Data**Oral Exposure Route**

No data available

Dermal Exposure Route

No data available

Inhalation (Dust/Mist) Exposure Route

No data available

Inhalation (Vapor) Exposure Route

No data available

Inhalation (Gas) Exposure Route

No data available

Ingredient Carcinogenicity Data

Chemical name	CAS No.	ACGIH	IARC	NTP	OSHA	Mexico
Sodium sulfate	7757-82-6	-	-	-	-	-
Glycine, N,N-1,2-cyclohexanediyl bis[N-(carboxymethyl)-, trisodium salt	36679-96-6	-	-	-	-	-
Phosphoric acid, potassium salt (1:1)	7778-77-0	-	-	-	-	-
Potassium pyrosulfate	7790-62-7	-	-	-	-	-
Cadmium	7440-43-9	A2	Group 1	Known	X	A2
Cuprate(2-), [[N,N-1,2-cyclohexanediylbis[N-(carboxymethyl)glycinato]](4-)-N,N,O,O, ON,ON]-, [OC-6-21-(trans)]-	19332-78-6	-	-	-	-	-
2-Propenamide, homopolymer	9003-05-8	-	-	-	-	-

Legend

English Group Known

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

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

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	0.129 mg/L	20 years	Lungs, Thorax, or Respiration Tumors	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

Product Germ Cell Mutagenicity *in vitro* Data
 No data available.

Ingredient Germ Cell Mutagenicity *in vitro* Data
 If available, see data 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 (Registry of Toxic Effects of Chemical Substances)
Chemical name	Test	Cell Strain	Reported dose	Exposure time	Results	Key literature references and sources for data
Cadmium (1 - 5%) CAS#: 7440-43-9	Micronucleus test	Mouse embryo	0.006 mmol/L	None reported	Positive test result for mutagenicity	RTECS (Registry of Toxic Effects of Chemical Substances)

Product Germ Cell Mutagenicity *in vivo* Data

Oral Exposure Route No data available
Dermal Exposure Route No data available
Inhalation (Dust/Mist) Exposure Route No data available
Inhalation (Vapor) Exposure Route No data available
Inhalation (Gas) Exposure Route No data available

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 No data available
Dermal Exposure Route No data available
Inhalation (Dust/Mist) Exposure Route No data available
Inhalation (Vapor) Exposure Route No data available
Inhalation (Gas) Exposure Route No data available

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
Sodium sulfate (40 - 50%) CAS#: 7757-82-6	Mouse TD _{Lo}	14000 mg/kg	4 days	Effects on Newborn Other neonatal measures or effects	RTECS (Registry of Toxic Effects of Chemical Substances)
Cadmium (1 - 5%) CAS#: 7440-43-9	Rat TD _{Lo}	23 mg/kg	22 days	Specific Developmental Abnormalities Blood and lymphatic systems (including spleen and marrow)	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 (1 - 5%) CAS#: 7440-43-9	Rat TD _{Lo}	215 mg/kg	Multiple generations	Effects on Fertility Pre-implantation mortality (e.g. reduction in number of implants per female; total number of implants per corpora lutea) Effects on Newborn Germ cell effects (in offspring)	RTECS (Registry of Toxic Effects of Chemical Substances)

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

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.

Product Ecological Data**Aquatic toxicity****Fish**

No data available

Crustacea

No data available

Algae

No data available

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
Sodium sulfate (40 - 50%) CAS#: 7757-82-6	96 hours	None reported	LC ₅₀	56 mg/L	IUCLID (The International Uniform Chemical Information Database)
Glycine, N,N-1,2-cyclohexane diylbis[N-(carboxymethyl)-, trisodium salt (20 - 30%) CAS#: 36679-96-6	96 hours	None reported	LC ₅₀	356000 mg/L	Estimation through ECOSARS v1.11 part of the Estimation Programs Interface (EPI) Suite™
Potassium pyrosulfate (5 - 10%) CAS#: 7790-62-7	96 hours	<i>Oncorhynchus mykiss</i>	LC ₅₀	420 mg/L	ERMA (New Zealand's Environmental Risk Management Authority)
Cadmium (1 - 5%) CAS#: 7440-43-9	96 hours	<i>Morone saxatilis</i>	LC ₅₀	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

Cadmium (1 - 5%) CAS#: 7440-43-9	7 days	<i>Epinephelus coioides</i>	NOEC	0.03333 mg/L	ECHA (The European Chemicals Agency)
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Crustacea If available, see ingredient data below

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 ₅₀	3150 mg/L	IUCLID (The International Uniform Chemical Information Database)
Glycine, N,N-1,2-cyclohexane diylbis[N-(carboxymet hyl)-, trisodium salt (20 - 30%) CAS#: 36679-96-6	48 Hours	None reported	EC ₅₀	26162 mg/L	Estimation through ECOSARS v1.11 part of the Estimation Programs Interface (EPI) Suite™
Potassium pyrosulfate (5 - 10%) CAS#: 7790-62-7	48 Hours	<i>Daphnia magna</i>	EC ₅₀	140 mg/L	ERMA (New Zealand's Environmental Risk Management Authority)
Cadmium (1 - 5%) CAS#: 7440-43-9	48 Hours	None reported	EC ₅₀	0.58 mg/L	PEEN (Pan European Ecological Network)
2-Propenamide, homopolymer (<0.1%) CAS#: 9003-05-8	48 Hours	<i>Daphnia pulex</i>	LC ₅₀	0.08 mg/L	CEPA (Canadian Environmental Protection Agency)
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 (The European Chemicals Agency)

Algae If available, see ingredient data below

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Glycine, N,N-1,2-cyclohexane diylbis[N-(carboxymet hyl)-, trisodium salt (20 - 30%) CAS#: 36679-96-6	96 hours	None reported	EC ₅₀	56103 mg/L	Estimation through ECOSARS v1.11 part of the Estimation Programs Interface (EPI) Suite™
Cadmium (1 - 5%) CAS#: 7440-43-9	72 Hours	None reported	EC ₅₀	0.132 mg/L	PEEN (Pan European Ecological Network)
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 ₁₀	0.00183 mg/L	ECHA (The European Chemicals Agency)

Other Information**Persistence and degradability****Product Biodegradability Data**

No data available.

Ingredient Biodegradability Data

Chemical name	Test method	Biodegradation	Exposure time	Results
Glycine,	None reported	None reported	None	Not readily

N,N-1,2-cyclohexane diylbis[N-(carboxymethyl)-, trisodium salt (20 - 30%) CAS#: 36679-96-6			reported	biodegradable
Cadmium (1 - 5%) CAS#: 7440-43-9	Element	None reported	None reported	Not readily biodegradable

Bioaccumulation**Product Bioaccumulation Data**

No data available.

Partition Coefficient (n-octanol/water)log K_{ow} ~ -2.94**Ingredient Bioaccumulation Data**

Chemical name	Test method	Exposure time	Species	Bioconcentration factor (BCF)	Results
Cadmium (1 - 5%) CAS#: 7440-43-9	None reported	None reported	None reported	None reported	Not determined

Mobility**Soil Organic Carbon-Water Partition Coefficient**log K_{oc} ~ -0.66**Water solubility**

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

Other adverse effects

Contains a substance with an endocrine-disrupting potential.

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.

14. Transportation information**MEX**

UN/ID no	UN3077
Proper shipping name	Environmentally hazardous substance, solid, n.o.s.
Hazard Class	9
Packing Group	III
Description	UN3077, Environmentally hazardous substance, solid, n.o.s. (Cadmium), 9, III

Note:

No special precautions necessary.

TDG

UN/ID no	UN3077
Proper shipping name	Environmentally hazardous substance, solid, n.o.s.
Hazard Class	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
U.S. DOT	
UN/ID no	UN3077
Proper shipping name	Environmentally hazardous substance, solid, n.o.s.
Hazard Class	9
Packing Group	III
Reportable Quantity (RQ)	Cadmium: RQ kg= 131.59
Special Provisions	146, 335, A112, B54, B120, IB8, IP3, N20, T1, TP33, 8
Marine pollutant	This product contains a chemical which is listed as a severe marine pollutant according to DOT.
Emergency Response Guide Number	171
ICAO (air)	
UN/ID no	UN3077
Proper shipping name	Environmentally hazardous substance, solid, n.o.s.
Hazard Class	9
Packing Group	III
Special Provisions	A158, A97, A179
Description	UN3077, Environmentally hazardous substance, solid, n.o.s. (Cadmium), 9, III
IATA	
UN/ID no	UN3077
Proper shipping name	Environmentally hazardous substance, solid, n.o.s.
Hazard Class	9
Packing Group	III
ERG Code	9L
Special precautions for user	A158, A179, A97
IMDG	
UN/ID no	UN3077
Proper shipping name	Environmentally hazardous substance, solid, n.o.s.
Hazard Class	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
RID	
UN/ID no	UN3077
Proper shipping name	Environmentally hazardous substance, solid, n.o.s.
Hazard Class	9
Packing Group	III
Classification code	M7
Description	UN3077, Environmentally hazardous substance, solid, n.o.s. (Cadmium,2-Propenamide, homopolymer), 9, III
ADR	
UN/ID no	UN3077
Proper shipping name	Environmentally hazardous substance, solid, n.o.s.
Hazard Class	9
Packing Group	III
Classification code	M7
Tunnel restriction code	(E)
Special precautions for user	274, 335, 601
Description	UN3077, Environmentally hazardous substance, solid, n.o.s. (Cadmium,2-Propenamide, homopolymer), 9, III, (E)
Labels	9

ADN

Proper shipping name	Environmentally hazardous substance, solid, n.o.s.
Hazard Class	9
Packing Group	III
Classification code	M7
Special Provisions	274, 335, 601
Description	UN3077, Environmentally hazardous substance, solid, n.o.s. (Cadmium,2-Propenamide, homopolymer), 9, III
Hazard label(s)	9
Limited quantity (LQ)	5 kg

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

Safety, health and environmental regulations/legislation specific for the substance or mixture

International Regulations

The Montreal Protocol on Substances that Deplete the Ozone Layer Not applicable

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

International Inventories

TSCA	Complies.
DSL/NDSL	Complies.
EINECS/ELINCS	Contact supplier for inventory compliance status.
ENCS	Contact supplier for inventory compliance status.
IECSC	Complies.
KECL	Complies.
PICCS	Contact supplier for inventory compliance status.
AICS	Contact supplier for inventory compliance status.

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

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

AICS - Australian Inventory of Chemical Substances

16. Other information

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

Key or legend to abbreviations and acronyms used in the safety data sheet**Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	SKN*	Skin designation

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
EPA (Environmental Protection Agency)
Acute Exposure Guideline Level(s) (AEGL(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
Japan GHS Classification
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine's PubMed database (NLM PUBMED)
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
RTECS (Registry of Toxic Effects of Chemical Substances)
World Health Organization

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Revision Note None

NOM-018-STPS-2015

The information is believed to be accurate, but it is not exhaustive and must be used only as guidance. It is based on the current state of knowledge of the chemical substance or mixture and is applicable to the appropriate safety precautions for the product.

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