



Be Right™

SAFETY DATA SHEET

Issue Date 09-Jun-2016

Revision Date 18-Jan-2017

Version 3

Section 1: Identification: Product identifier and chemical identity

Product identifier

Product Name NitraVer® 5 Nitrate Reagent
Product Code(s) 1403499

Distributed by:



WatertestSystems

Unit 4/13 Swaffham Rd, Minto NSW 2566
Tel: +612 87065400 www.watertestsystems.com.au
e: service@watertestsystems.com.au

Other means of identification

Safety data sheet number M00049

Recommended use of the chemical and restrictions on use

Recommended Use Laboratory reagent. Determination of nitrate.

Uses advised against No information available

Details of manufacturer or importer

Manufacturer Address

Hach Company
P.O.Box 389 Loveland, CO 80539 USA
(970) 669-3050

Supplier

Hach Company
10/15 Howleys Road
Notting Hill VIC 3168
Tel: 1300 887 735

Emergency telephone number

13 11 26

Section 2: Hazard(s) identification

GHS - Classification

Acute toxicity - Oral	Category 4 - (H302)
Acute toxicity - Inhalation (Dusts/Mists)	Category 3 - (H331)
Skin corrosion/irritation	Category 2 - (H315)
Serious eye damage/eye irritation	Category 2A - (H319)
Skin sensitization	Category 1 - (H317)
Germ cell mutagenicity	Category 2 - (H341)
Carcinogenicity	Category 1B - (H350)
Reproductive toxicity	Category 2 - (H361)
Specific target organ toxicity (repeated exposure)	Category 2 - (H373)

Label elements



Signal word - Danger

Hazard statements

H302 - Harmful if swallowed

H331 - Toxic if inhaled

H315 - Causes skin irritation

H319 - Causes serious eye irritation

H317 - May cause an allergic skin reaction

H341 - Suspected of causing genetic defects

H350 - May cause cancer

H361 - Suspected of damaging fertility or the unborn child

H373 - May cause damage to organs through prolonged or repeated exposure

EU Specific Hazard Statements

Not applicable

Precautionary statements

P201 - Obtain special instructions before use

P202 - Do not handle until all safety precautions have been read and understood

P281 - Use personal protective equipment as required

P264 - Wash face, hands and any exposed skin thoroughly after handling

P270 - Do not eat, drink or smoke when using this product

P271 - Use only outdoors or in a well-ventilated area

P272 - Contaminated work clothing should not be allowed out of the workplace

P280 - Wear protective gloves

P260 - Do not breathe dust/fume/gas/mist/vapors/spray

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

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 advice/attention

P302 + P352 - IF ON SKIN: Wash with plenty of soap and water

P362 - Take off contaminated clothing and wash before reuse

P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention

P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell

P330 - Rinse mouth

P308 + P313 - IF exposed or concerned: Get medical advice/attention

P405 - Store locked up

P403 + P233 - Store in a well-ventilated place. Keep container tightly closed

P501 - Dispose of contents/ container to an approved waste disposal plant

Other hazards

Very toxic to aquatic life with long lasting effects

Very toxic to aquatic life

No information available

Section 3: Composition and information on ingredients, in accordance with Schedule 8

Chemical Family

Mixture

Substance

Not applicable

Mixture

Chemical Name	Formula	CAS No	EC No	Percent Range
Phosphoric acid, potassium salt (1:1)	KH ₂ PO ₄	7778-77-0	231-913-4	30 - 40%
Benzenesulfonic acid, 4-amino-	C ₆ H ₇ NO ₃ S	121-57-3	204-482-5	20 - 30%
Benzoic acid, 2,5-dihydroxy-	C ₇ H ₆ O ₄	490-79-9	207-718-5	20 - 30%
Cadmium	Cd	7440-43-9	231-152-8	3 - 7%
Copper, [propanedioato(2-)-O,O]-	C ₃ H ₂ O ₄ Cu	7268-92-0	230-687-4	0.1 - 1%
2-Propenamide, homopolymer	(C ₃ H ₅ NO) _x	9003-05-8	-	<0.1%

Section 4: FIRST AID MEASURES

Emergency telephone number

Poisons Information Center, Australia: 13 11 26
 Poisons Information Center, New Zealand: 0800 764 766

Description of first aid measures

General advice	In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).
Inhalation	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a physician immediately.
Eye contact	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If symptoms persist, call a physician.
Skin contact	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. If symptoms persist, call a physician.
Ingestion	IF SWALLOWED: Rinse Mouth. Call a physician immediately.
Self-protection of the first aider	Use personal protective equipment as required. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

Most important symptoms and effects, both acute and delayed

Symptoms See Section 11: TOXICOLOGICAL INFORMATION

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

Section 5: Firefighting measures

Suitable Extinguishing Media

Suitable Extinguishing Media Water. Carbon dioxide. Dry chemical.

Specific hazards arising from the chemical

Specific hazards arising from the chemical	May react violently with. Strong oxidizers. Hydrazoic acid. Ammonium Nitrate. In the event of fire and/or explosion do not breathe fumes. May cause sensitization in susceptible persons. Thermal decomposition can lead to release of irritating and toxic gases and vapors.
Hazardous combustion products	Cadmium oxide. Nitrogen oxides. Sulfur oxides. Phosphorus oxides. Carbon monoxide, Carbon dioxide.

Special protective actions for fire-fighters

Special protective equipment for fire-fighters	Use personal protective equipment as required. Wear self contained breathing apparatus for fire fighting if necessary.
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Section 6: ACCIDENTAL RELEASE MEASURES**Personal precautions, protective equipment and emergency procedures**

Personal precautions	Evacuate personnel to safe areas. Do not touch or walk through spilled material. Ventilate affected area. Use personal protective equipment as required.
Other Information	Use personal protective equipment as required.
For emergency responders	Use personal protection recommended in Section 8.

Environmental precautions

Avoid release to the environment. See Section 12 for additional ecological information.

Methods and material for containment and cleaning up

Methods for containment	Prevent further leakage or spillage if safe to do so. Cover with plastic sheet to prevent spreading.
Methods for cleaning up	Take up mechanically, placing in appropriate containers for disposal. Clean contaminated surface thoroughly. Dispose of in accordance with local, state and federal regulations or laws.

Precautions to prevent secondary hazards

Clean contaminated objects and areas thoroughly observing environmental regulations. See section 8 for more information. See section 13 for more information.

Section 7: Handling and storage, including how the chemical may be safely used**Precautions for safe handling**

Advice on safe handling	Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Do not breathe dust/fume/gas/mist/vapors/spray.
General Hygiene Considerations	Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Take off all contaminated clothing and wash it before reuse. Wash hands thoroughly after handling. Regular cleaning of equipment, work area and clothing is recommended.

Conditions for safe storage, including any incompatibilities

Storage Conditions	Keep in a dry, cool and well-ventilated place. Keep out of the reach of children. Keep in properly labeled containers.
Incompatible materials	Oxidizers. Hydrazoic acid. Ammonium Nitrate. Sulfur.
Materials to avoid	Strong oxidizing agents. Strong acids. Strong bases.

Section 8: Exposure controls and personal protection

Control parameters**Exposure Limits**

Chemical Name	Australia
Cadmium (3 - 7%) CAS#: 7440-43-9	TWA: 0.01 mg/m ³

Legend See section 16 for terms and abbreviations

Appropriate engineering controls

Engineering Controls Showers. Eyewash stations. Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear tight sealing safety goggles and/or face protection shield.

Skin and body protection Wear protective gloves and protective clothing.

Respiratory protection In case of insufficient ventilation, wear suitable respiratory equipment.

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. Prevent product from entering drains. Avoid creating dust.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES
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Information on basic physical and chemical properties

Physical state Solid

Gas Under Pressure Not classified according to GHS criteria

Appearance powder **Color** Gray

Odor Odorless **Odor threshold** No data available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
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Molecular weight	No data available	
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pH	2.8	5% Solution
Melting point/freezing point	180 °C / 356 °F	
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)	2.0	
Partition Coefficient (n-octanol/water)	No data available	
Soil Organic Carbon-Water Partition Coefficient	No data available	
Autoignition temperature	No data available	
Decomposition temperature	No data available	
Dynamic viscosity	Not applicable	
Kinematic viscosity	Not applicable	

Solubility(ies)**Water solubility**

<u>Water solubility classification</u>	<u>Water solubility</u>	<u>Water Solubility Temperature</u>
Soluble	> 1000 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	Soluble	> 1000 mg/L	25 °C / 77 °F

Particle Size No information available

Particle Size Distribution No information available

Other Information

Metal Corrosivity Not classified as corrosive to metal according to GHS criteria

Steel Corrosion Rate 2.06 mm/yr / 0.08 in/yr

Aluminum Corrosion Rate

Volatile Organic Compounds (VOC) Content Not applicable.

Bulk density No data available

Explosive properties Not classified according to GHS criteria.

Explosion data	Can burn in fire, releasing toxic vapors.
Upper explosion limit	No data available
Lower explosion limit	No data available
Flammable properties	Can burn in fire, releasing toxic vapors.
Flammability Limit in Air	
Upper flammability limit:	No data available
Lower flammability limit:	No data available
Flash point	Not applicable
Method	No information available
Oxidizing properties	Not classified according to GHS criteria.
Reactivity properties	Not classified as self-reactive, pyrophoric, self-heating or emitting flammable gases in contact with water according to GHS criteria.

Section 10: STABILITY AND REACTIVITY

Reactivity

Reactivity properties Not classified as self-reactive, pyrophoric, self-heating or emitting flammable gases in contact with water according to GHS criteria.

Chemical stability

Stability Stable under normal conditions

Explosion data

Upper explosion limit No data available

Lower explosion limit No data available

Autoignition temperature

No data available

Sensitivity to Mechanical Impact

None.

Sensitivity to Static Discharge

None.

Possibility of Hazardous Reactions

Possibility of Hazardous Reactions None under normal processing.

Hazardous polymerization Hazardous polymerization does not occur.

Conditions to avoid

Conditions to avoid Heat. Poor Ventilation.

Incompatible materials

Incompatible materials Oxidizers. Hydrazoic acid. Ammonium Nitrate. Sulfur.

Materials to avoid Strong oxidizing agents. Strong acids. Strong bases.

Hazardous Decomposition Products

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

Section 11: TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Product Information	Toxic if inhaled. Causes skin irritation. Causes serious eye irritation. Harmful if swallowed. Skin sensitizer.
Inhalation	Avoid breathing dust/fume/gas/mist/vapors/spray. Toxic by inhalation. Immediate medical attention is required.
Eye contact	Contact with eyes may cause irritation. Severely irritating to eyes.
Skin contact	Causes skin irritation. May cause sensitization by skin contact.
Ingestion	Harmful if swallowed. Ingestion may cause irritation to mucous membranes.
Aggravated Medical Conditions	Skin disorders. Eye disorders.
Toxicologically synergistic products	None known.
Toxicokinetics, metabolism and distribution	See ingredients information below.

Chemical Name	Toxicokinetics, metabolism and distribution
Benzenesulfonic acid, 4-amino- (20 - 30%) CAS#: 121-57-3	The only metabolite found in the urine of rat, rabbits, guinea-pigs is the N-acetylated derivative. In rats and rabbits the compound is only partly metabolized, whereas in guinea-pigs ca. 75% are excreted as N-acetyl derivative.
Benzoic acid, 2,5-dihydroxy- (20 - 30%) CAS#: 490-79-9	Aspirin metabolite.
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

Test data reported below

Oral Exposure Route

Endpoint type	Key literature references and sources for data
Rat LD ₅₀	Outside testing

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

Unknown Acute Toxicity

0.31 % of the mixture consists of ingredient(s) of unknown toxicity.

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

ATEmix (inhalation-dust/mist)	0.89 mg/L
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Ingredient Acute Toxicity Data**Oral Exposure Route**

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	Mouse LD ₅₀	1700 mg/kg	None reported	None reported	IUCLID (The International Uniform Chemical Information Database)
Benzenesulfonic acid, 4-amino- (20 - 30%) CAS#: 121-57-3	Rat LD ₅₀	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 ₅₀	800 mg/kg	None reported	None reported	RTECS (Registry of Toxic Effects of Chemical Substances)
Cadmium (3 - 7%) CAS#: 7440-43-9	Rat LD ₅₀	225 mg/kg	None reported	None reported	GESTIS (Information System on Hazardous Substances of the German Social Accident Insurance)
Chemical Name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Benzoic acid, 2,5-dihydroxy- (20 - 30%) CAS#: 490-79-9	Mouse LD ₅₀	4500 mg/kg	None reported	None reported	Vendor SDS
Chemical Name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Cadmium (3 - 7%) CAS#: 7440-43-9	Mouse TD _{Lo}	8 mg/kg	None reported	Musculoskeletal Osteoporosis	RTECS (Registry of Toxic Effects of Chemical Substances)

Dermal Exposure Route

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	Rabbit LD ₅₀	> 4640 mg/kg	None reported	None reported	RTECS (Registry of Toxic Effects of Chemical Substances)

Inhalation (Dust/Mist) Exposure Route

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 ₅₀	0.0125 mg/L	4 hours	None reported	ERMA (New Zealand 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	Human LD _{Lo}	0.468 mg/L	4 hours	Vascular Thromobosis distant from injection site	RTECS (Registry of Toxic Effects of Chemical Substances)

Inhalation (Vapor) Exposure Route No data available

Inhalation (Gas) Exposure Route No data available

Product Skin Corrosion/Irritation Data

No data available.

Ingredient Skin Corrosion/Irritation Data

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)

Product Serious Eye Damage/Eye Irritation Data

No data available.

Ingredient Eye Damage/Eye Irritation Data

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)

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

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)

Respiratory Sensitization Exposure Route No data available.

Chronic Toxicity Information

Product Repeat Dose 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 Repeat Dose Toxicity Data

Oral Exposure Route

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 _{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)

Dermal Exposure Route No data available

Inhalation (Dust/Mist) Exposure Route

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 _{Lo}	0.000088 mg/L	3139 days	Kidney, Ureter, or Bladder Proteinuria	RTECS (Registry of Toxic Effects of Chemical Substances)

Inhalation (Vapor) Exposure Route No data available

Inhalation (Gas) Exposure Route 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	-	-	-	-
Cadmium	7440-43-9	A2	Group 1	Known	X
Copper, [propanedioato(2-)-O,O]-	7268-92-0	-	-	-	-
2-Propenamide, homopolymer	9003-05-8	-	-	-	-

Legend

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

Product Carcinogenicity Data No data available

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

Oral Exposure Route No data available

Dermal Exposure Route No data available

Inhalation (Dust/Mist) Exposure Route

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)

Inhalation (Vapor) Exposure Route No data available

Inhalation (Gas) Exposure Route No data available

Product Germ Cell Mutagenicity *invitro* Data

No data available.

Ingredient Germ Cell Mutagenicity *invitro* Data

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%)	DNA damage	Human lymphocyte	0.25 mmol/L	1 hours	Positive test result for mutagenicity	RTECS (Registry of Toxic Effects of

CAS#: 7440-43-9						Chemical Substances)
Chemical Name	Test	Cell Strain	Reported dose	Exposure time	Results	Key literature references and sources for data
Cadmium (3 - 7%) 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)

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 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

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

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 _{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)

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

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity

Based on the classification principles, not classified as hazardous to the environment.

Unknown Aquatic Toxicity

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

Product Ecological Data

Aquatic toxicity

Fish

No data available

Crustacea

No data available

Algae

No data available

Terrestrial toxicity

Soil

No data available

Vertebrates

No data available

Invertebrates

No data available

Ingredient Ecological Data

Aquatic toxicity

Fish

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 ₅₀	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 ₅₀	1140 mg/L	Estimation through ECOSARS v1.11 part of the Estimation Programs Interface (EPI) Suite™
Cadmium (3 - 7%) 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 (3 - 7%) CAS#: 7440-43-9	96 hours	None reported	LC ₅₀	7.8 mg/L	PEEN (Pan European Ecological Network)

Crustacea

Chemical Name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Benzenesulfonic acid, 4-amino-	48 Hours	<i>Daphnia magna</i>	EC ₅₀	85.66 mg/L	IUCLID (The International Uniform Chemical Information

Chemical Name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
(20 - 30%) CAS#: 121-57-3					Database)
Benzoic acid, 2,5-dihydroxy- (20 - 30%) CAS#: 490-79-9	48 Hours	None reported	EC ₅₀	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 ₅₀	0.58 mg/L	PEEN (Pan European Ecological Network)
2-Propenamamide, homopolymer (<0.1%) CAS#: 9003-05-8	48 Hours	<i>Daphnia pulex</i>	LC ₅₀	0.08 mg/L	CEPA (Canadian Environmental Protection Agency)
Cadmium (3 - 7%) CAS#: 7440-43-9	96 hours	<i>Mysidopsis bahia</i>	LC ₅₀	0.0016 mg/L	PEEN (Pan European Ecological Network)

Algae

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 ₅₀	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 ₅₀	388 mg/L	Estimation through ECOSARS v1.11 part of the Estimation Programs Interface (EPI) Suite™
Cadmium (3 - 7%) CAS#: 7440-43-9	72 Hours	None reported	EC ₅₀	0.132 mg/L	PEEN (Pan European Ecological Network)

Terrestrial toxicity

Soil	No data available
Vertebrates	No data available
Invertebrates	No data available

Other Information**Persistence and degradability**

None known.

Product Biodegradability Data

If available, see ingredient data below.

Ingredient Biodegradability Data

Test data reported below

Chemical Name	Test method	Biodegradation	Exposure time	Results
Benzoic acid,	None reported	97.6%	20 days	Readily

2,5-dihydroxy- (20 - 30%) CAS#: 490-79-9				biodegradable
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Bioaccumulation

If available, see ingredient data below.

Product Bioaccumulation Data No data available.**Ingredient Bioaccumulation Data** No data available**Additional information****Product Information** No data available**Partition Coefficient (n-octanol/water)** No data available**Ingredient Information**

Chemical Name	Partition Coefficient (n-octanol/water)	Method
Benzoic acid, 2,5-dihydroxy- (20 - 30%) CAS#: 490-79-9	log K _{ow} = 1.74	No information available

Mobility

Mobility in soil: Moderate to high mobility. If available, see ingredient data below.

Product Information No data available**Soil Organic Carbon-Water Partition Coefficient** No data available**Ingredient Information**

Chemical Name	Soil Organic Carbon-Water Partition Coefficient	Method
Benzoic acid, 2,5-dihydroxy- (20 - 30%) CAS#: 490-79-9	log K _{oc} = 1.45	Estimation through KOCWIN v2.00 part of the Estimation Programs Interface (EPI) Suite™

Additional information**Water solubility****Product Information**

Water solubility classification	Water solubility	Water Solubility Temperature
Soluble	> 1000 mg/L	25 °C / 77 °F

Ingredient Information

Chemical Name	Water solubility classification	Water solubility	Water solubility temperature °C	Water solubility temperature °F
Phosphoric acid, potassium salt (1:1) (30 - 40%)	Soluble	> 1000 mg/L	25 °C	77 °F

CAS#: 7778-77-0				
Benzenesulfonic acid, 4-amino- (20 - 30%) CAS#: 121-57-3	Slightly soluble	10 mg/L	20 °C	68 °F
Benzoic acid, 2,5-dihydroxy- (20 - 30%) CAS#: 490-79-9	Soluble	5000 mg/L	20 °C	68 °F
Cadmium (3 - 7%) CAS#: 7440-43-9	Insoluble	< 0.1 mg/L	25 °C	77 °F
Copper, [propanedioato(2-)-O,O]- (0.1 - 1%) CAS#: 7268-92-0	Slightly soluble	> 0.1 mg/L	25 °C	77 °F
2-Propenamamide, homopolymer (<0.1%) CAS#: 9003-05-8	Soluble	> 1000 mg/L	25 °C	77 °F

Other adverse effects

Contains a substance with an endocrine-disrupting potential.

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

Section 13: DISPOSAL CONSIDERATIONS

Waste treatment methods**Waste from residues/unused products**

Disposal should be in accordance with applicable regional, national, and local laws and regulations.

Contaminated packaging

Do not reuse container. Working in a well-ventilated area. Rinse three times with an appropriate solvent. Collect rinsate and dispose of according to local, state, or federal regulations. Rinsate from empty containers may contain sufficient product to require disposal as hazardous waste in countries other than the US. Improper disposal or reuse of this container may be dangerous and illegal.

Section 14: TRANSPORT INFORMATION

ADG

UN Number UN3077
 Proper shipping name Environmentally hazardous substances, solid, n.o.s.
 Hazard Class 9
 Subsidiary hazard class 6.1
 Packing Group III

IATA

UN/ID no UN3077
 Proper shipping name Environmentally hazardous substances, solid, n.o.s.
 Hazard Class 9
 Subsidiary hazard class 6.1
 Packing Group III
 ERG Code 171

IMDG

UN/ID no	UN3077
Hazard Class	9
Subsidiary hazard class	6.1
Packing Group	III
Marine pollutant	This material meets the definition of a marine pollutant

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.

Section 15: REGULATORY INFORMATION

Regulatory information**National regulations****Australia**

Model Work Health and Safety Regulations

[NOHSC:2011(2003) National Code of Practice for the Preparation of Material Safety Data Sheets

Labelling of Workplace Hazardous Chemicals Code of Practice

See section 8 for national exposure control parameters

Poison Schedule Number 6

National pollutant inventory

Subject to reporting requirement

Chemical Name	National pollutant inventory
Benzenesulfonic acid, 4-amino- - 121-57-3	20 MW Threshold category 2b total 60000 MWH Threshold category 2b total 1 tonne/h Threshold category 2a total 25 tonne/yr Threshold category 1a total 400 tonne/yr Threshold category 2a total 2000 tonne/yr Threshold category 2b total
Cadmium - 7440-43-9	10 tonne/yr Threshold category 1 2000 tonne/yr Threshold category 2b 60000 MWH Threshold category 2b 20 MW Threshold category 2b
Copper, [propanedioato(2-)-O,O]- - 7268-92-0	10 tonne/yr Threshold category 1 2000 tonne/yr Threshold category 2b 60000 MWH Threshold category 2b 20 MW Threshold category 2b

Banned and/or restricted

This product contains one or more substance(s) subject to authorization (Regulation (EC) No. 1907/2006 (REACH), Annex XIV).

Verify that requirements related to using, handling, and storing substances subject to prohibition, authorization or restriction are met.

Chemical Name	Carcinogen	Restricted substance
Cadmium - 7440-43-9	-	For abrasive blasting at a concentration of >0.1% For abrasive blasting at a concentration of >0.1%

		as Cadmium
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International Inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies
KECL	Does not comply
PICCS	Complies
TCSI	Complies
AICS	Complies
NZIoC	Complies

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

TCSI- Taiwan Chemical Substances Inventory

AICS- Australian Inventory of Chemical Substances

NZIoC- New Zealand Inventory of Chemicals

International Regulations

Ozone-depleting substances (ODS) Not applicable

Persistent Organic Pollutants Not applicable

Export Notification requirements Not applicable

Section 16: Any other relevant information

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

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

Legend - Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Ceiling Limit Value	MAC	Maximum Allowable Concentration
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		

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Revision Date 18-Jan-2017

Revision Note

None

Reference Sources for Section 11

See Section 11: TOXICOLOGICAL INFORMATION

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.

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End of Safety Data Sheet