



Be Right™

SAFETY DATA SHEET

Issue Date 15-May-2017

Revision Date
15-May-2017

Version 1.1

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1. IDENTIFICATION

Product identifier

Product Name SP 510™ Hardness Monitor Buffer Solution for 10 mg/L Hardness

Other means of identification

Product Code(s) 2768649

Safety data sheet number M00650

Recommended use of the chemical and restrictions on use

Recommended Use Hardness determination.

Uses advised against None.

Restrictions on use None.

Details of the supplier of the safety data sheet

Manufacturer Address

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

Emergency telephone number

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

2. HAZARDS IDENTIFICATION

Classification

Regulatory Status

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

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 1

Hazards not otherwise classified (HNOC)

Not applicable

Label elements

Signal word - Danger



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Hazard statements

H315 - Causes skin irritation

H318 - Causes serious eye damage

Precautionary statements

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

P280 - Wear protective gloves/protective clothing/eye protection/face protection

P234 - Keep only in original container

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P310 - Immediately call a POISON CENTER or doctor/physician

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

P332 + P313 - If skin irritation occurs: Get medical advice/attention

P362 - Take off contaminated clothing and wash before reuse

P390 - Absorb spillage to prevent material damage

P406 - Store in corrosive resistant stainless steel container with a resistant inliner

Other Information

May be harmful if swallowed

May be harmful in contact with skin

Toxic to aquatic life with long lasting effects

Toxic to aquatic life

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Not applicable

Mixture

Percent ranges are used where confidential product information is applicable.

Chemical Name	CAS No	Percent Range	HMRIC #
2-Amino-2-methyl-1-propanol	124-68-5	50 - 60%	-
Acetic acid	64-19-7	1 - 5%	-
Octylphenol ethoxylate	9036-19-5	1 - 5%	-
Tetrasodium EDTA, dihydrate	10378-23-1	0.1 - 1%	-

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4. FIRST AID MEASURES

Description of first aid measures

General advice	IF IN EYES: Flush eyes for at least 15 minutes. May cause skin irritation.
Eye contact	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.
Skin contact	For minor skin contact, avoid spreading material on unaffected skin. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. Remove and isolate contaminated clothing and shoes. Call a POISON CENTER or doctor if you feel unwell. If skin irritation persists, call a physician.
Inhalation	Aspiration into lungs can produce severe lung damage.
Ingestion	Never give anything by mouth to an unconscious person. Clean mouth with water and drink afterwards plenty of water. Remove from exposure, lie down. Call a POISON CENTER or doctor/physician if you feel unwell. Do not induce vomiting without medical advice.
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.

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.

Flammable properties

Can burn in fire, releasing toxic vapors.

Specific hazards arising from the chemical

None reported.

Hazardous combustion products

Nitrogen oxides. Carbon monoxide, Carbon dioxide.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

U.S. Notice

Only persons properly qualified to respond to an emergency involving hazardous substances may respond to a spill according to federal regulations (OSHA 29 CFR 1910.120(a)(v)) and per your company's emergency response plan and guidelines/procedures. See Section 13, Special Instructions for disposal assistance. Outside of the US, only persons properly qualified according to state or local regulations should respond to a spill involving chemicals.

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EC Notice Only persons properly qualified to respond to an emergency involving hazardous substances should respond to a spill involving chemicals. See Section 13, Special Instructions for disposal assistance.

WHMIS Notice Only persons properly qualified to respond to an emergency involving hazardous substances should respond to a spill involving chemicals. See Section 13, Special Instructions for disposal assistance.

Personal precautions, protective equipment and emergency procedures

Personal precautions Evacuate personnel to safe areas. Remove all sources of ignition. Do not touch or walk through spilled material. Ventilate affected area. Use personal protective equipment as required.

For emergency responders Use personal protection recommended in Section 8.

Environmental precautions

Environmental precautions Prevent entry into waterways, sewers, basements or confined areas. Do not flush into surface water or sanitary sewer system. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. 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. Dike far ahead of liquid spill for later disposal.

Methods for cleaning up Take necessary precautions in observance of pertinent physical hazards. Neutralize spill if necessary. Soak up with inert absorbent material. 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.

Emergency Response Guide Number Not applicable

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Absorb spillage to prevent material damage.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed. Keep out of the reach of children. Keep containers tightly closed in a cool, well-ventilated place. Keep in properly labeled containers. Keep/store only in original container.

Flammability class Class IIIB

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Acetic acid 1 - 5%	STEL: 15 ppm TWA: 10 ppm	TWA: 10 ppm TWA: 25 mg/m ³ (vacated) TWA: 10 ppm (vacated) TWA: 25 mg/m ³	IDLH: 50 ppm TWA: 10 ppm TWA: 25 mg/m ³ STEL: 15 ppm

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			STEL: 37 mg/m ³
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Chemical Name	Alberta OEL	British Columbia OEL	Manitoba OEL	New Brunswick OEL	New Foundland & Labrador OEL
Acetic acid 1 - 5%	TWA: 10 ppm TWA: 25 mg/m ³ STEL: 15 ppm STEL: 37 mg/m ³	TWA: 10 ppm STEL: 15 ppm	TWA: 10 ppm STEL: 15 ppm	TWA: 10 ppm TWA: 25 mg/m ³ STEL: 15 ppm STEL: 37 mg/m ³	TWA: 10 ppm STEL: 15 ppm

Chemical Name	Northwest Territories OEL	Nova Scotia OEL	Nunavut OEL	Ontario TWA	Prince Edward Island OEL
Acetic acid 1 - 5%	TWA: 10 ppm STEL: 15 ppm	STEL: 15 ppm TWA: 10 ppm	TWA: 10 ppm STEL: 15 ppm	TWA: 10 ppm STEL: 15 ppm	STEL: 15 ppm TWA: 10 ppm

Chemical Name	Quebec OEL	Saskatchewan OEL	Yukon OEL
Acetic acid 1 - 5%	TWA: 10 ppm TWA: 25 mg/m ³ STEL: 15 ppm STEL: 37 mg/m ³	TWA: 10 ppm STEL: 15 ppm	STEL: 25 ppm STEL: 43 mg/m ³ TWA: 10 ppm TWA: 25 mg/m ³

Other Information Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

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. Avoid contact with eyes.

Skin and body protection Wear protective gloves and protective clothing.

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

General Hygiene Considerations Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. Wear suitable gloves and eye/face protection. Wash face, hands and any exposed skin thoroughly after handling. Regular cleaning of equipment, work area and clothing is recommended. Handle in accordance with good industrial hygiene and safety practice. Avoid prolonged or repeated contact with skin. Take off all contaminated clothing and wash it before reuse. Do not eat, drink or smoke when using this product. Keep away from food, drink and animal feeding stuffs.

Environmental exposure controls

Do not allow into any sewer, on the ground or into any body of water. Local authorities should be advised if significant spillages cannot be contained.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state Liquid

Gas Under Pressure Not classified according to GHS criteria

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Appearance aqueous solution

Color colorless

Odor Amine

Odor threshold No data available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
Molecular weight	No data available	
pH	10.7	
Melting point/freezing point	No data available	
Boiling point / boiling range	102 °C / 216 °F	
Evaporation rate	0.56 (water = 1)	
Vapor pressure	No data available	
Vapor density (air = 1)	No data available	
Specific gravity (water = 1 / air = 1)	0.987	
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	No data available	
Kinematic viscosity	No data available	

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

Other Information

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

GHS Metal Corrosivity Classification Category 1, H290

Steel Corrosion Rate No data available

Aluminum Corrosion Rate No data available

Bulk density Not applicable

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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

> 96 °C / 205 °F

Method

CC (closed cup)

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.

10. STABILITY AND 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

Stable under recommended storage conditions.

Special dangers of the product

None reported

Possibility of Hazardous Reactions

None under normal processing.

Hazardous polymerization

Hazardous polymerization does not occur.

Conditions to avoid

Extremes of temperature and direct sunlight. Incompatible materials.

Incompatible materials

Strong oxidizing agents. Strong acids. Strong bases.

Hazardous Decomposition Products

Nitrogen oxides. Carbon monoxide. Carbon dioxide.

Explosive properties

Not classified according to GHS criteria. Can burn in fire, releasing toxic vapors.

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Upper explosion limit No data available

Lower explosion limit No data available

Autoignition temperature

No data available

Sensitivity to Static Discharge

None reported

Sensitivity to Mechanical Impact

None reported

11. TOXICOLOGICAL INFORMATION

NIOSH (RTECS) Number None reported

Information on Likely Routes of Exposure

Product Information	Corrosive to eyes. Causes skin irritation. May be harmful if swallowed. MAY BE HARMFUL IF ABSORBED THROUGH SKIN. May be harmful in contact with skin.
Inhalation	No known effect based on information supplied.
Eye contact	Corrosive to the eyes and may cause severe damage including blindness.
Skin contact	Causes skin irritation. May be harmful in contact with skin.
Ingestion	May be 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
Tetrasodium EDTA, dihydrate (0.1 - 1%) CAS#: 10378-23-1	Creates chelate complexis with metals like Ca, Mg, Zn... Can affect Ca blood levels.

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

Unknown acute toxicity

37% 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 (oral)	2,990.00 mg/kg
ATEmix (dermal)	2,906.00 mg/kg

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
2-Amino-2-methyl-1-propanol (50 - 60%) CAS#: 124-68-5	Rat LD ₅₀	~ 2900 mg/kg	None reported	None reported	IUCLID (The International Uniform Chemical Information Database)
Acetic acid (1 - 5%) CAS#: 64-19-7	Rat LD ₅₀	3310 mg/kg	None reported	None reported	Vendor SDS
Octylphenol ethoxylate (1 - 5%) CAS#: 9036-19-5	Rat LD ₅₀	1700 mg/kg	None reported	None reported	No information available
Tetrasodium EDTA, dihydrate (0.1 - 1%) CAS#: 10378-23-1	Rat LD ₅₀	2700 mg/kg	None reported	None reported	IUCLID (The International Uniform Chemical Information Database)
Chemical Name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Octylphenol ethoxylate (1 - 5%) CAS#: 9036-19-5	Rat LD ₅₀	4190 mg/kg	None reported	None reported	RTECS (Registry of Toxic Effects of Chemical Substances)

Dermal Exposure Route

If available, see data below

Chemical Name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
2-Amino-2-methyl-1-propanol (50 - 60%) CAS#: 124-68-5	Rabbit LD ₅₀	> 2000 mg/kg	None reported	None reported	IUCLID (The International Uniform Chemical Information Database)
Acetic acid (1 - 5%) CAS#: 64-19-7	Rabbit LD ₅₀	1060 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
Octylphenol ethoxylate (1 - 5%) CAS#: 9036-19-5	Rabbit LD ₅₀	> 3000 mg/kg	None reported	None reported	Vendor SDS

Inhalation (Dust/Mist) Exposure Route

If available, see data below

Inhalation (Vapor) Exposure Route

If available, see data below

Chemical Name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Acetic acid (1 - 5%) CAS#: 64-19-7	Rat LC ₅₀	11.4 mg/L	4 hours	None reported	Vendor SDS
Chemical Name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Acetic acid (1 - 5%) CAS#: 64-19-7	Mouse LC ₅₀	5620 mg/L	4 hours	None reported	RTECS (Registry of Toxic Effects of Chemical Substances)

Inhalation (Gas) Exposure Route

No data available

Product Specific Target Organ Toxicity Single Exposure Data

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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

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
Magnesium carbonates (<0.1%) CAS#: 7757-69-9	Rat TC _{Lo}	0.22 mg/L	4 hours	Cardiac Pulse rate increase without fall in BP Liver Impaired liver function tests Kidney, Ureter, or Bladder Other changes in urine composition Blood Changes in serum composition (e.g. TP, bilirubin, cholesterol) Biochemical Enzyme inhibition, induction, or change in blood or tissue levels (phosphatases)	RTECS (Registry of Toxic Effects of Chemical Substances)

Inhalation (Vapor) Exposure Route If available, see data below

Inhalation (Gas) Exposure Route No data available

Aspiration toxicity

No data available

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
2-Amino-2-methyl-1-propanol (50 - 60%) CAS#: 124-68-5	Standard Draize Test	Rabbit	None reported	None reported	Corrosive to skin	ECHA (The European Chemicals Agency)
Acetic acid (1 - 5%) CAS#: 64-19-7	Standard Draize Test	Human	50 mg	24 hours	Mild skin irritant	RTECS (Registry of Toxic Effects of Chemical Substances)

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Octylphenol ethoxylate (1 - 5%) CAS#: 9036-19-5	Existing human experience	Human	None reported	None reported	Not corrosive or irritating to skin	Vendor SDS
Tetrasodium EDTA, dihydrate (0.1 - 1%) CAS#: 10378-23-1	Standard Draize Test	Rabbit	500 mg	24 hours	Skin irritant	RTECS (Registry of Toxic Effects of Chemical Substances)
Chemical Name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Acetic acid (1 - 5%) CAS#: 64-19-7	Open Irritation Test	Rabbit	525 mg	None reported	Corrosive to skin	RTECS (Registry of Toxic Effects of Chemical Substances)

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
2-Amino-2-methyl-1-propanol (50 - 60%) CAS#: 124-68-5	Standard Draize Test	Rabbit	0.1 mL	None reported	Corrosive to eyes	ECHA (The European Chemicals Agency)
Acetic acid (1 - 5%) CAS#: 64-19-7	Standard Draize Test	Rabbit	5.0 mg	0.5 minutes	Mild eye irritant	RTECS (Registry of Toxic Effects of Chemical Substances)
Octylphenol ethoxylate (1 - 5%) CAS#: 9036-19-5	Standard Draize Test	Rabbit	100 mg	None reported	Corrosive to eyes	RTECS (Registry of Toxic Effects of Chemical Substances)
Tetrasodium EDTA, dihydrate (0.1 - 1%) CAS#: 10378-23-1	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

If available, see data below.

Chemical Name	Test method	Species	Results	Key literature references and sources for data
2-Amino-2-methyl-1-propanol (50 - 60%) CAS#: 124-68-5	Buehler Test	Guinea pig	Not confirmed to be a skin sensitizer	IUCLID (The International Uniform Chemical Information Database)

Respiratory Sensitization Exposure Route

No data available.

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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 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

Chemical Name	CAS No	ACGIH	IARC	NTP	OSHA
2-Amino-2-methyl-1-propanol	124-68-5	-	-	-	-
Acetic acid	64-19-7	-	-	-	-
Octylphenol ethoxylate	9036-19-5	-	-	-	-
Tetrasodium EDTA, dihydrate	10378-23-1	-	-	-	-

Legend

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

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

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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

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
Octylphenol ethoxylate (1 - 5%) CAS#: 9036-19-5	DNA inhibition	Human lymphocyte	5 mg/L	None reported	Positive test result for mutagenicity	RTECS (Registry of Toxic Effects of Chemical Substances)
Chemical Name	Test	Cell Strain	Reported dose	Exposure time	Results	Key literature references and sources for data
Octylphenol ethoxylate (1 - 5%) CAS#: 9036-19-5	DNA inhibition	Mouse cells - not specified	10 mg/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

If available, see data below

Chemical Name	Test	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Octylphenol ethoxylate (1 - 5%) CAS#: 9036-19-5	None reported	Rat	10200 mg/kg	None reported	Positive test result for mutagenicity	Vendor SDS

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

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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

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

12. ECOLOGICAL INFORMATION

Ecotoxicity

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

Terrestrial toxicity

Soil

No data available

Vertebrates

No data available

Invertebrates

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
2-Amino-2-methyl-1-propanol (50 - 60%) CAS#: 124-68-5	96 hours	<i>Pleuronectes platessa</i>	LC ₅₀	184 mg/L	IUCLID (The International Uniform Chemical Information Database)
Octylphenol ethoxylate (1 - 5%) CAS#: 9036-19-5	96 hours	<i>Lepomis macrochirus</i>	LC ₅₀	> 10 mg/L	Vendor SDS
Tetrasodium EDTA, dihydrate (0.1 - 1%) CAS#: 10378-23-1	96 hours	<i>Lepomis macrochirus</i>	LC ₅₀	157 mg/L	IUCLID (The International Uniform Chemical Information Database)
Chemical Name	Exposure	Species	Endpoint	Reported	Key literature references and

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	time		type	dose	sources for data
Acetic acid (1 - 5%) CAS#: 64-19-7	48 hours	<i>Oryzias latipes</i>	LC ₅₀	350 mg/L	GESTIS (Information System on Hazardous Substances of the German Social Accident Insurance)
Octylphenol ethoxylate (1 - 5%) CAS#: 9036-19-5	96 hours	<i>Pimephales promelas</i>	LC ₅₀	>= 4 mg/L	No information available
Tetrasodium EDTA, dihydrate (0.1 - 1%) CAS#: 10378-23-1	96 hours	<i>Lepomis macrochirus</i>	LC ₅₀	410 mg/L	IUCLID (The International Uniform Chemical Information Database)
Chemical Name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Octylphenol ethoxylate (1 - 5%) CAS#: 9036-19-5	7 days	<i>Oncorhynchus mykiss</i>	NOEC	0.004 mg/L	EPA (United States Environmental Protection Agency)

Crustacea

If available, see ingredient data below

Chemical Name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
2-Amino-2-methyl-1-propanol (50 - 60%) CAS#: 124-68-5	48 Hours	<i>Daphnia magna</i>	EC ₅₀	193 mg/L	IUCLID (The International Uniform Chemical Information Database)
Acetic acid (1 - 5%) CAS#: 64-19-7	48 Hours	None reported	LC ₅₀	90.1 mg/L	PEEN (Pan European Ecological Network)
Octylphenol ethoxylate (1 - 5%) CAS#: 9036-19-5	48 Hours	<i>Daphnia magna</i>	EC ₅₀	>= 18 mg/L	ERMA (New Zealand Environmental Risk Management Authority)
Chemical Name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
2-Amino-2-methyl-1-propanol (50 - 60%) CAS#: 124-68-5	24 hours	<i>Daphnia magna</i>	EC ₅₀	65 mg/L	IUCLID (The International Uniform Chemical Information Database)
Acetic acid (1 - 5%) CAS#: 64-19-7	24 hours	<i>Artemia salina</i>	LC ₅₀	42 mg/L	PEEN (Pan European Ecological Network)
Tetrasodium EDTA, dihydrate (0.1 - 1%) CAS#: 10378-23-1	24 hours	<i>Daphnia magna</i>	LC ₅₀	625 mg/L	IUCLID (The International Uniform Chemical Information Database)

Algae

If available, see ingredient data below

Chemical Name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
2-Amino-2-methyl-1-propanol (50 - 60%) CAS#: 124-68-5	72 Hours	<i>Scenedesmus subspicatus</i>	EC ₅₀	520 mg/L	IUCLID (The International Uniform Chemical Information Database)
Octylphenol ethoxylate (1 - 5%) CAS#: 9036-19-5	96 hours	<i>Selenastrum sp.</i>	EC ₅₀	0.21 mg/L	Vendor SDS

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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
Octylphenol ethoxylate (1 - 5%) CAS#: 9036-19-5	OECD Test No. 301D: Ready Biodegradability: Closed Bottle Test (TG 301 D)	None reported	None reported	Readily biodegradable

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
Acetic acid (1 - 5%) CAS#: 64-19-7	log K _{ow} = -0.17	No information available
Octylphenol ethoxylate (1 - 5%) CAS#: 9036-19-5	log K _{ow} = 2.7	No information available
Tetrasodium EDTA, dihydrate (0.1 - 1%) CAS#: 10378-23-1	log K _{ow} = 5.01	Estimation through KOWWIN v1.68 part of the Estimation Programs Interface (EPI) Suite™

Mobility

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

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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
Acetic acid (1 - 5%) CAS#: 64-19-7	log K _{oc} = 0.062	No information available

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
2-Amino-2-methyl-1-propanol CAS#: 124-68-5	Soluble	> 1000 mg/L	25 °C	77 °F
Acetic acid CAS#: 64-19-7	Soluble	> 1000 mg/L	25 °C	77 °F
Octylphenol ethoxylate CAS#: 9036-19-5	Soluble	> 1000 mg/L	25 °C	77 °F
Tetrasodium EDTA, dihydrate CAS#: 10378-23-1	Completely soluble	1000000 mg/L	20 °C	68 °F

Other adverse effects

No information available.

Chemical Name	EU - Endocrine Disrupters Candidate List	EU - Endocrine Disrupters - Evaluated Substances	Endocrine disrupting potential
Octylphenol ethoxylate (1 - 5%) CAS#: 9036-19-5	Group III Chemical	-	-

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes

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

Contaminated packaging

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. Dispose of empty container as normal trash. In the US, rinsate from empty containers is classified as hazardous waste and should be disposed of at an E.P.A. approved facility. 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. Disposal should be in accordance with applicable regional, national, and local

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laws and regulations.

Special instructions for disposal Adjust to a pH between 6 and 9 with an acid, such as sulfuric or citric. Open cold water tap completely, slowly pour the reacted material to the drain. Allow cold water to run for 5 minutes to completely flush the system.

14. TRANSPORT INFORMATION

U.S. DOT	Not regulated
TDG	Not regulated
IATA	Not regulated
IMDG	Not regulated
Marine pollutant	This material meets the definition of a marine pollutant
Note:	No special precautions necessary.

Additional information

There is a possibility that this product could be contained in a reagent set or kit composed of various compatible dangerous goods. If the item is not in a reagent set or kit, the classification given above applies.

If the item is part of a reagent set or kit the classification would change to the following:

UN3316 Chemical Kit, Hazard Class 9, Packing Group II or III.

If the item is not regulated, the Chemical Kit classification does not apply.

15. REGULATORY INFORMATION

National Inventories

TSCA	Complies
DSL/NDSL	Complies

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

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

International Inventories

EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
TCSI	Complies
AICS	Complies
NZIoC	Complies

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

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Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	No
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
Acetic acid 64-19-7	5000 lb	-	-	X

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Acetic acid 64-19-7	5000 lb	-	RQ 5000 lb final RQ RQ 2270 kg final RQ

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
2-Amino-2-methyl-1-propanol 124-68-5	X	X	X
Acetic acid 64-19-7	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

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

Special Comments

None

Additional information

Global Automotive Declarable Substance List (GADSL)

Not applicable

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NFPA and HMIS Classifications

NFPA	Health hazards - 3	Flammability - 1	Instability - 0	Physical and Chemical Properties -
HMIS	Health hazards - 3	Flammability - 1	Physical Hazards - 0	Personal protection - X - See section 8 for more information

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

NIOSH IDLH

Immediately Dangerous to Life or Health

ACGIH

ACGIH (American Conference of Governmental Industrial Hygienists)

NDF

no data

Legend - Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
MAC	Maximum Allowable Concentration	Ceiling	Ceiling Limit Value
X	Listed	Vacated	These values have no official status. The only binding levels of contaminants are those listed in the final OSHA PEL. These lists are for reference purposes only. Please note that some reference state regulations of these "liberated" exposure limits in their state regulations.
SKN*	Skin designation	SKN+	Skin sensitization
RSP+	Respiratory sensitization	**	Hazard Designation
C	Carcinogen	R	Reproductive toxicant
M	mutagen		

Prepared By Hach Product Compliance Department

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Revision Note None

Disclaimer

USER RESPONSIBILITY: Each user should read and understand this information and incorporate it in individual site safety programs in accordance with applicable hazard communication standards and regulations.

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED TO BE ACCURATE. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.

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End of Safety Data Sheet