



Be Right™

# SAFETY DATA SHEET

Issue Date 20-Jul-2016

Revision Date 31-Aug-2016

Version 3

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## 1. IDENTIFICATION

### Product identifier

**Product Name** Ammonia Salicylate Reagent

### Other means of identification

**Product Code(s)**  
2395266

**Safety data sheet number** M00127

**Component of Kits or Sets** 2428700; 2428700RGT; 243003; 243003RGT; 2559800; 2559800RGT; 2559833; 2559833RGT; 2604545; 2604545Q; 2606945; 2606945Q; 2712000; 2712000RGT; 2925300; 2925300K

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

**Recommended Use** Laboratory Use. Reagent for ammonia test.

**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

### Product Information

**Chemical Name** Not applicable

**Formula** Not applicable

**CAS No** Not applicable

**Alternate CAS Number** Not applicable

**NIOSH (RTECS) Number** None reported

## 2. HAZARDS IDENTIFICATION

### Classification

#### Regulatory Status

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

Acute toxicity - Oral	Category 4
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 1
Specific target organ toxicity (single exposure)	Category 3

#### Hazards not otherwise classified (HNOC)

Not applicable

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**Label elements**

**Signal word** - Danger



**Hazard statements**

H302 - Harmful if swallowed  
H315 - Causes skin irritation  
H318 - Causes serious eye damage  
H335 - May cause respiratory irritation

**Precautionary statements**

P264 - Wash face, hands and any exposed skin thoroughly after handling  
P270 - Do not eat, drink or smoke when using this product  
P280 - Wear protective gloves/protective clothing/eye protection/face protection  
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray  
P271 - Use only outdoors or in a well-ventilated area  
P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing  
P312 - Call a POISON CENTER or doctor/physician if you feel unwell  
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  
P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell  
P330 - Rinse mouth  
P403 + P233 - Store in a well-ventilated place. Keep container tightly closed  
P405 - Store locked up  
P501 - Dispose of contents/ container to an approved waste disposal plant

**Other Information**

Not applicable

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

**Substance**

Not applicable

**Mixture**

**Chemical Family** Mixture.

Percent ranges are used where confidential product information is applicable.

Chemical Name	CAS No	Percent Range	HMRIC #
Sodium salicylate	54-21-7	30 - 50	-

Butanedioic acid, 2,3-dihydroxy-[R-(R*),R*]-, disodium salt	868-18-8	7 - 13	-
Sodium nitroferricyanide	14402-89-2	0.1 - 1	-
m-Nitrophenol	554-84-7	0.1 - 1	-

#### 4. FIRST AID MEASURES

##### Description of first aid measures

<b>General advice</b>	In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).
<b>Eye contact</b>	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.
<b>Skin contact</b>	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. If symptoms persist, call a physician.
<b>Inhalation</b>	IF INHALED: Remove person to fresh air and keep comfortable for breathing. If symptoms persist, call a physician.
<b>Ingestion</b>	IF SWALLOWED: Rinse Mouth. If symptoms persist, call a physician.
<b>Self-protection of the first aider</b>	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

Dry chemical. Carbon dioxide. Alcohol foam. Water.

**Unsuitable extinguishing media** Caution: Use of water spray when fighting fire may be inefficient.

##### Flammable properties

During a fire, this product decomposes to form toxic gases. Material is not classified as flammable according to GHS criteria.

##### Specific hazards arising from the chemical

This product will not burn or explode.

**Hazardous combustion products** May emit acrid smoke and fumes.

##### 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.

**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. 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** 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.

**Emergency Response Guide Number** Not applicable

**7. HANDLING AND STORAGE**

**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.

**Conditions for safe storage, including any incompatibilities**

**Storage Conditions** Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children.

**Flammability class** Not applicable

**Incompatible materials** Acids. iodine. Iron Salts. lead acetate. organic materials. Oxidizers. Silver Nitrate. sodium phosphate.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Control parameters**

**Exposure Guidelines**

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sodium nitroferricyanide 0.1 - 1	TWA: 1 mg/m <sup>3</sup>	TWA: 5 mg/m <sup>3</sup> (vacated) TWA: 1 mg/m <sup>3</sup> (vacated) TWA: 5 mg/m <sup>3</sup> *	IDLH: 25 mg/m <sup>3</sup> CN TWA: 1 mg/m <sup>3</sup> Fe

Chemical Name	Alberta OEL	British Columbia	Manitoba OEL	New Brunswick	New Foundland &
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		OEL		OEL	Labrador OEL
Sodium nitroferricyanide 0.1 - 1	TWA: 1 mg/m <sup>3</sup>	TWA: 1 mg/m <sup>3</sup> STEL: 2 mg/m <sup>3</sup>	TWA: 1 mg/m <sup>3</sup>	TWA: 1 mg/m <sup>3</sup>	TWA: 1 mg/m <sup>3</sup>

Chemical Name	Northwest Territories OEL	Nova Scotia OEL	Nunavut OEL	Ontario TWA	Prince Edward Island OEL
Sodium nitroferricyanide 0.1 - 1	TWA: 1 mg/m <sup>3</sup> STEL: 3 mg/m <sup>3</sup>	TWA: 1 mg/m <sup>3</sup>	TWA: 1 mg/m <sup>3</sup> STEL: 3 mg/m <sup>3</sup>	TWA: 1 mg/m <sup>3</sup>	TWA: 1 mg/m <sup>3</sup>

Chemical Name	Quebec OEL	Saskatchewan OEL	Yukon OEL
Sodium nitroferricyanide 0.1 - 1	TWA: 1.0 mg/m <sup>3</sup> Ceiling: 10 ppm Ceiling: 11 mg/m <sup>3</sup> SKN*	TWA: 1 mg/m <sup>3</sup> STEL: 3 mg/m <sup>3</sup>	STEL: 2 mg/m <sup>3</sup> STEL: 5 mg/m <sup>3</sup> TWA: 1 mg/m <sup>3</sup> TWA: 5 mg/m <sup>3</sup> SKN*

**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.

**Skin and body protection** Wear protective gloves and protective clothing.

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

**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.

**Environmental exposure controls**

Do not allow into any sewer, on the ground or into any body of water. Avoid creating dust.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**Information on basic physical and chemical properties**

**Physical state** Solid

**Gas Under Pressure** Not classified according to GHS criteria

**Appearance** powder **Color** Tan

**Odor** Odorless **Odor threshold** No data available

Property	Values	Remarks • Method
Molecular weight	No data available	
pH	7.84	5% Solution

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**Melting point/freezing point** 97 °C / 207 °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)** 1.689  
**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

#### Other Information

**Metal Corrosivity** Not classified as corrosive to metal according to GHS criteria  
**Steel Corrosion Rate** Not applicable  
**Aluminum Corrosion Rate** Not applicable  
**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** During a fire, this product decomposes to form toxic gases.  
Material is not classified as flammable according to GHS criteria.

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#### 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.

## 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

Heating to decomposition. Extreme temperatures. Poor Ventilation.

#### Incompatible materials

Acids. iodine. Iron Salts. lead acetate. organic materials. Oxidizers. Silver Nitrate. sodium phosphate.

#### Hazardous Decomposition Products

cyanide. Nitrogen oxides. sodium oxides.

#### Explosive properties

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

**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

### Information on Likely Routes of Exposure

<b>Product Information</b>	Corrosive to eyes. May cause respiratory irritation. Causes skin irritation. Harmful if swallowed.
<b>Inhalation</b>	Avoid breathing dust/fume/gas/mist/vapors/spray. Inhalation of dust in high concentration may cause irritation of respiratory system.
<b>Eye contact</b>	Corrosive to the eyes and may cause severe damage including blindness.
<b>Skin contact</b>	Causes skin irritation.
<b>Ingestion</b>	Harmful if swallowed. Ingestion may cause irritation to mucous membranes.
<b>Aggravated Medical Conditions</b>	Skin disorders. Eye disorders. Respiratory disorders.
<b>Toxicologically synergistic products</b>	Exposure to and/or consumption of alcohol may increase toxic effects of this product.
<b>Toxicokinetics, metabolism and distribution</b>	See ingredients information below.

Chemical Name	Toxicokinetics, metabolism and distribution
Sodium salicylate (30 - 50) CAS#: 54-21-7	Sodium Salicylate is the sodium salt of salicylic acid which is the precursor of aspirin.
m-Nitrophenol (0.1 - 1) CAS#: 554-84-7	Based on the rapid urinary elimination of the mononitrophenols, the compounds may be restricted primarily to the blood and urine following absorption by humans.

### Product Acute Toxicity Data

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

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

<b>ATEmix (oral)</b>	1,666.00 mg/kg
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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
Sodium salicylate (30 - 50) CAS#: 54-21-7	Rat LD <sub>50</sub>	930 mg/kg	None reported	<b>Behavioral</b> Convulsions or effect on seizure threshold Muscle contraction or spasticity	RTECS (Registry of Toxic Effects of Chemical Substances)
Butanedioic acid, 2,3-dihydroxy-[R-(R*, R*)]-, disodium salt (7 - 13) CAS#: 868-18-8	Mouse LD <sub>50</sub>	4360 mg/kg	None reported	None reported	EPA (United States Environmental Protection Agency)
m-Nitrophenol	Rat	328 mg/kg	None	None reported	Vendor SDS



(0.1 - 1) CAS#: 554-84-7	LD <sub>50</sub>		reported		
<b>Chemical Name</b>	<b>Endpoint type</b>	<b>Reported dose</b>	<b>Exposure time</b>	<b>Toxicological effects</b>	<b>Key literature references and sources for data</b>
Sodium salicylate (30 - 50) CAS#: 54-21-7	Mouse LD <sub>50</sub>	540 mg/kg	None reported	None reported	RTECS (Registry of Toxic Effects of Chemical Substances)
Butanedioic acid, 2,3-dihydroxy-[R-(R*, R*)]-, disodium salt (7 - 13) CAS#: 868-18-8	Rabbit LD <sub>50</sub>	5290 mg/kg	None reported	None reported	EPA (United States Environmental Protection Agency)
m-Nitrophenol (0.1 - 1) CAS#: 554-84-7	Dog LD <sub>50</sub>	83 mg/kg	None reported	None reported	Vendor SDS
<b>Chemical Name</b>	<b>Endpoint type</b>	<b>Reported dose</b>	<b>Exposure time</b>	<b>Toxicological effects</b>	<b>Key literature references and sources for data</b>
Sodium salicylate (30 - 50) CAS#: 54-21-7	Human LD <sub>Lo</sub>	700 mg/kg	None reported	<b>Lungs, Thorax, or Respiration</b> Dyspnea	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

**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
Sodium salicylate (30 - 50) CAS#: 54-21-7	Standard Draize Test	Rabbit	500 mg	4 hours	Mild skin irritant	No information available
m-Nitrophenol (0.1 - 1) CAS#: 554-84-7	Standard Draize Test	Rabbit	20 mg	24 hours	Mild skin irritant	Vendor SDS

**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
Sodium salicylate (30 - 50) CAS#: 54-21-7	Standard Draize Test	Rabbit	100 mg	1 hours	Corrosive to eyes	ECHA (The European Chemicals Agency)
Butanedioic acid, 2,3-dihydroxy-[R-(R*, R*)]-, disodium salt	None reported	Human	None reported	None reported	Not corrosive or irritating to eyes	ECHA (The European Chemicals Agency)

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R*]-, disodium salt (7 - 13) CAS#: 868-18-8						
m-Nitrophenol (0.1 - 1) CAS#: 554-84-7	Standard Draize Test	Rabbit	5 mg	24 hours	Not corrosive or irritating 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**

Chemical Name	Test method	Species	Results	Key literature references and sources for data
Sodium salicylate (30 - 50) CAS#: 54-21-7	Based on human experience	Human	Not confirmed to be a skin sensitizer	Vendor SDS
Butanedioic acid, 2,3-dihydroxy-[R-(R*, R*)]-, disodium salt (7 - 13) CAS#: 868-18-8	None reported	Human	Not confirmed to be a skin sensitizer	ECHA (The European Chemicals Agency)

**Respiratory Sensitization Exposure Route**

Chemical Name	Test method	Species	Results	Key literature references and sources for data
Sodium salicylate (30 - 50) CAS#: 54-21-7	Based on human experience	Human	Not confirmed to be a respiratory sensitizer	Vendor SDS
Butanedioic acid, 2,3-dihydroxy-[R-(R*, R*)]-, disodium salt (7 - 13) CAS#: 868-18-8	None reported	Human	Not confirmed to be a skin sensitizer	ECHA (The European Chemicals Agency)

**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** No data available

**Dermal Exposure Route** No data available

**Inhalation (Dust/Mist) Exposure Route** No data available

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Inhalation (Vapor) Exposure Route No data available

Inhalation (Gas) Exposure Route No data available

Chemical Name	CAS No	ACGIH	IARC	NTP	OSHA
Sodium salicylate	54-21-7	-	-	-	-
Butanedioic acid, 2,3-dihydroxy-[R-(R*,R*)]-, disodium salt	868-18-8	-	-	-	-
Sodium nitroferricyanide	14402-89-2	-	-	-	-
m-Nitrophenol	554-84-7	-	-	-	-

**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)	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

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

Chemical Name	Test	Cell Strain	Reported dose	Exposure time	Results	Key literature references and sources for data
m-Nitrophenol (0.1 - 1) CAS#: 554-84-7	Mutation in microorganisms	<i>Salmonella typhimurium</i>	1 mg/plate	None reported	Positive test result for mutagenicity	CCRIS (Chemical Carcinogenesis Research Information System)
Chemical Name	Test	Cell Strain	Reported	Exposure	Results	Key literature

Chemical Name	Test	Cell Strain	Reported dose	Exposure time	Results	Key literature references and sources for data
m-Nitrophenol (0.1 - 1) CAS#: 554-84-7	DNA repair	Bacillus subtilis	0.5 mg/disc	None reported	Positive test result for mutagenicity	CCRIS (Chemical Carcinogenesis Research Information System)
m-Nitrophenol (0.1 - 1) CAS#: 554-84-7	Mutation in microorganisms	<i>Salmonella typhimurium</i>	2.5 mg/plate	None reported	Positive test result for mutagenicity	CCRIS (Chemical Carcinogenesis Research Information System)

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**

Chemical Name	Test	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Sodium salicylate (30 - 50) CAS#: 54-21-7	DNA damage	Rat	30 mg/L	None reported	Positive test result for mutagenicity	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

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
Sodium salicylate (30 - 50)	Rat TD <sub>Lo</sub>	40 mg/kg	1 days	Effects on Newborn Stillbirth	RTECS (Registry of Toxic Effects of Chemical

CAS#: 54-21-7					Substances)
Chemical Name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Sodium salicylate (30 - 50) CAS#: 54-21-7	Rat TD <sub>Lo</sub>	250 mg/kg	9 days	<b>Specific Developmental Abnormalities</b> Musculoskeletal system	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
Sodium salicylate (30 - 50) CAS#: 54-21-7	Rat TD <sub>Lo</sub>	25 mg/kg	21 days	<b>Effects on Newborn</b> Weaning or lactation index (e.g. # alive at weaning per # alive at day 4)	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

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity** Based on the classification principles, not classified as hazardous to the 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
Sodium salicylate (30 - 50) CAS#: 54-21-7	96 hours	<i>Pimephales promelas</i>	LC <sub>50</sub>	1370 mg/L	GESTIS (Information System on Hazardous Substances of the German Social Accident Insurance)
Butanedioic acid, 2,3-dihydroxy-[R-(R*, R*)]-, disodium salt (7 - 13) CAS#: 868-18-8	96 hours	None reported	LC <sub>50</sub>	612000 mg/L	Estimation through ECOSARS v1.11 part of the Estimation Programs Interface (EPI) Suite™
Chemical Name	Exposure	Species	Endpoint	Reported	Key literature references and

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	time		type	dose	sources for data
Sodium salicylate (30 - 50) CAS#: 54-21-7	96 hours	None reported	LC <sub>50</sub>	1760 mg/L	GESTIS (Information System on Hazardous Substances of the German Social Accident Insurance)
m-Nitrophenol (0.1 - 1) CAS#: 554-84-7	48 hours	<i>Oryzias latipes</i>	LC <sub>50</sub>	1.3 mg/L	EPA (United States Environmental Protection Agency)

#### Crustacea

Chemical Name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Butanedioic acid, 2,3-dihydroxy-[R-(R*, R*)]-, disodium salt (7 - 13) CAS#: 868-18-8	48 Hours	None reported	LC <sub>50</sub>	263000 mg/L	Estimation through ECOSARS v1.11 part of the Estimation Programs Interface (EPI) Suite™
Chemical Name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
m-Nitrophenol (0.1 - 1) CAS#: 554-84-7	24 hours	<i>Daphnia magna</i>	EC <sub>50</sub>	35 mg/L	EPA (United States Environmental Protection Agency)

#### Algae

Chemical Name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Butanedioic acid, 2,3-dihydroxy-[R-(R*, R*)]-, disodium salt (7 - 13) CAS#: 868-18-8	96 hours	None reported	EC <sub>50</sub>	623770 mg/L	Estimation through ECOSARS v1.11 part of the Estimation Programs Interface (EPI) Suite™

#### Terrestrial toxicity

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

#### Other Information

Canadian Environmental Protection Act (CEPA) - Domestic Substances List (DSL): Environmentally Hazardous Substances Categorizations				
Chemical Name	Category	Persistent	Bioaccumulation	Inherently Toxic to Aquatic Organisms
Sodium nitroferricyanide (0.1 - 1) CAS#: 14402-89-2	Inorganics	Yes	No	Yes

#### Persistence and degradability

None known.

#### Product Biodegradability Data

If available, see ingredient data below.

#### Ingredient Biodegradability Data

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Test data reported below

Chemical Name	Test method	Biodegradation	Exposure time	Results
Sodium salicylate (30 - 50) CAS#: 54-21-7	None reported	50%	140 days	Not readily biodegradable
Butanedioic acid, 2,3-dihydroxy-[R-(R*, R*)]-, disodium salt (7 - 13) CAS#: 868-18-8	None reported	73%	14 days	Readily biodegradable

**Bioaccumulation**

If available, see ingredient data below.

**Product Bioaccumulation Data**

If available, see ingredient data below.

**Ingredient Bioaccumulation Data**

Chemical Name	Test method	Exposure time	Species	Bioconcentration factor (BCF)	Results
m-Nitrophenol (0.1 - 1) CAS#: 554-84-7	Estimation through BCFBAF v3.01 part of the Estimation Programs Interface (EPI) Suite™	None reported	None reported	BCF = 25.12	Does not have the potential to bioaccumulate

**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
Sodium salicylate (30 - 50) CAS#: 54-21-7	log K <sub>ow</sub> = 2.26	No information available
Butanedioic acid, 2,3-dihydroxy-[R-(R*,R*)]-, disodium salt (7 - 13) CAS#: 868-18-8	log K <sub>ow</sub> = -4.28	No information available
m-Nitrophenol (0.1 - 1) CAS#: 554-84-7	log K <sub>ow</sub> = 1.985	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	Method
---------------	-------------------------------------	--------

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	<b>Coefficient</b>	
Sodium salicylate (30 - 50) CAS#: 54-21-7	log K <sub>oc</sub> = 1.34	No information available
Butanedioic acid, 2,3-dihydroxy-[R-(R*,R*)]-, disodium salt (7 - 13) CAS#: 868-18-8	log K <sub>oc</sub> = -1.33	No information available
m-Nitrophenol (0.1 - 1) CAS#: 554-84-7	log K <sub>oc</sub> = 1.68	No information available

#### Additional information

#### Water solubility

#### Product Information

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

#### Ingredient Information

<b>Chemical Name</b>	<b>Water solubility classification</b>	<b>Water solubility</b>	<b>Water solubility temperature °C</b>	<b>Water solubility temperature °F</b>
Sodium salicylate (30 - 50) CAS#: 54-21-7	Completely soluble	1000000 mg/L	20 °C	68 °F
Butanedioic acid, 2,3-dihydroxy-[R-(R*,R*)]-, disodium salt (7 - 13) CAS#: 868-18-8	Completely soluble	100000 mg/L	20 °C	68 °F
Sodium nitroferricyanide (0.1 - 1) CAS#: 14402-89-2	Soluble	> 1000 mg/L	25 °C	77 °F
m-Nitrophenol (0.1 - 1) CAS#: 554-84-7	Completely soluble	13550 mg/L	25 °C	77 °F

#### **Other adverse effects**

Contains a substance with an endocrine-disrupting potential.

<b>Chemical Name</b>	<b>EU - Endocrine Disrupters Candidate List</b>	<b>EU - Endocrine Disrupters - Evaluated Substances</b>	<b>Endocrine disrupting potential</b>
Sodium nitroferricyanide (0.1 - 1) CAS#: 14402-89-2	Chemical Group III	-	-

### 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



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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 laws and regulations.

**Special instructions for disposal** Dilute to 3 to 5 times the volume with cold water. Flush system with plenty of water. If permitted by regulation. Open cold water tap completely, slowly pour the material to the drain. Check with national, local municipal and state authorities and waste contractors for pertinent local information on the disposal of this article.

#### 14. TRANSPORT INFORMATION

<b>DOT</b>	Not regulated
<b>TDG</b>	Not regulated
<b>IATA</b>	Not regulated
<b>IMDG</b>	Not regulated
<b>Note:</b>	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

<b>TSCA</b>	Complies
<b>DSL/NDSL</b>	Complies

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

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

##### International Inventories

<b>EINECS/ELINCS</b>	Complies
<b>ENCS</b>	Complies
<b>IECSC</b>	Complies
<b>KECL</b>	Complies
<b>PICCS</b>	Complies
<b>TCSI</b>	Complies
<b>AICS</b>	Complies
<b>NZIoC</b>	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

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### **SARA 313**

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

<b>Chemical Name</b>	<b>SARA 313 - Threshold Values %</b>
Sodium nitroferricyanide (CAS #: 14402-89-2)	1.0

### **SARA 311/312 Hazard Categories**

<b>Acute health hazard</b>	Yes
<b>Chronic Health Hazard</b>	No
<b>Fire hazard</b>	No
<b>Sudden release of pressure hazard</b>	No
<b>Reactive Hazard</b>	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)

<b>Chemical Name</b>	<b>CWA - Reportable Quantities</b>	<b>CWA - Toxic Pollutants</b>	<b>CWA - Priority Pollutants</b>	<b>CWA - Hazardous Substances</b>
Sodium nitroferricyanide 14402-89-2	-	X	X	-
m-Nitrophenol 554-84-7	-	-	-	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

<b>Chemical Name</b>	<b>Hazardous Substances RQs</b>	<b>CERCLA/SARA RQ</b>	<b>Reportable Quantity (RQ)</b>
m-Nitrophenol 554-84-7	100 lb	-	RQ 100 lb final RQ RQ 45.4 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**

<b>Chemical Name</b>	<b>New Jersey</b>	<b>Massachusetts</b>	<b>Pennsylvania</b>
Sodium nitroferricyanide 14402-89-2	X	-	X
m-Nitrophenol 554-84-7	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**

### **NFPA and HMIS Classifications**

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<b>NFPA</b>	<b>Health hazards - 3</b>	<b>Flammability - 0</b>	<b>Instability - 0</b>	<b>Physical and Chemical Properties -</b>
<b>HMIS</b>	<b>Health hazards - 3</b>	<b>Flammability - 0</b>	<b>Physical hazards - 0</b>	<b>Personal protection - X</b> - 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

**Issue Date** 20-Jul-2016

**Revision Date** 31-Aug-2016

**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.**

HACH COMPANY©2015

**End of Safety Data Sheet**



**Be Right™**

# SAFETY DATA SHEET

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## 1. IDENTIFICATION

### Product identifier

**Product Name** Ammonia Cyanurate Reagent

### Other means of identification

**Product Code(s)** 2395466

**Safety data sheet number** M00128

**UN/ID no** UN2680

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

**Recommended Use** Laboratory Use. Reagent for ammonia test.

**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)

Corrosive to metals	Category 1
Skin corrosion/irritation	Category 1
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**

H290 - May be corrosive to metals  
H314 - Causes severe skin burns and eye damage  
H412 - Harmful to aquatic life with long lasting effects

**Precautionary statements**

P260 - Do not breathe dust/fume/gas/mist/vapors/spray  
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  
P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing  
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P303 + P361 + P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower  
P363 - Wash contaminated clothing before reuse  
P301 + P330 + P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting  
P310 - Immediately call a POISON CENTER or doctor/physician  
P390 - Absorb spillage to prevent material damage  
P405 - Store locked up  
P406 - Store in corrosive resistant stainless steel container with a resistant inliner  
P501 - Dispose of contents/ container to an approved waste disposal plant

**Other Information**

Harmful to aquatic life  
May be harmful in contact with skin

**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 #
Lithium hydroxide monohydrate	1310-66-3	1 - 5%	-
Dichloroisocyanuric acid, sodium salt	2893-78-9	1 - 5%	-

## 4. FIRST AID MEASURES

### Description of first aid measures

<b>General advice</b>	See section 8 for PPE that may be required during handling. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). If no local exhaust use approved fume hood and/or respirator. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician. Remove from exposure, lie down. Immediate medical attention is required. IF IN EYES: Flush eyes for at least 15 minutes. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
<b>Eye contact</b>	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.
<b>Skin contact</b>	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a physician immediately.
<b>Inhalation</b>	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a physician immediately.
<b>Ingestion</b>	IF SWALLOWED: Rinse Mouth. Do NOT induce vomiting. Call a physician immediately.
<b>Self-protection of the first aider</b>	First aider: Pay attention to self-protection. Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

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

**Symptoms** 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

Dry chemical. Carbon dioxide. Water.

**Unsuitable extinguishing media** Caution: Use of water spray when fighting fire may be inefficient.

### Flammable properties

During a fire, irritating and highly toxic gases may be generated by thermal decomposition. Not classified as flammable according to GHS criteria.

### Specific hazards arising from the chemical

The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating and toxic gases and vapors. In the event of fire and/or explosion do not breathe fumes.

### **Hazardous combustion products**

May emit toxic and corrosive fumes.

### 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

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

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

### Environmental precautions

<b>Environmental precautions</b>	Do not allow into any sewer, on the ground or into any body of water. Should not be released into the environment. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. See Section 12 for additional ecological information.
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### Methods and material for containment and cleaning up

<b>Methods for containment</b>	Prevent further leakage or spillage if safe to do so. Cover with plastic sheet to prevent spreading.
<b>Methods for cleaning up</b>	Take necessary precautions in observance of pertinent physical hazards. 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** 154

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

**Flammability class** Not applicable

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

**Exposure Guidelines** .

Chemical Name	Northwest Territories OEL	Nova Scotia OEL	Nunavut OEL	Ontario TWA	Prince Edward Island OEL
Lithium hydroxide monohydrate 1 - 5%	NDF	NDF	NDF	STEL: 1 mg/m <sup>3</sup>	NDF

**Legend** See section 16 for terms and abbreviations

**Appropriate engineering controls**

**Engineering Controls** If no local exhaust use approved fume hood or self-contained breathing apparatus  
 If no local exhaust use approved fume hood and/or respirator  
 Showers  
 Eyewash stations

**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 impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

**Respiratory protection** Do not breathe gas/fumes/vapor/spray. If no local exhaust use approved fume hood and/or respirator. In case of inadequate ventilation wear respiratory protection.

**General Hygiene Considerations** Avoid breathing (dust, vapor, mist, gas). 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. Do not eat, drink or smoke when using this product. Keep away from food, drink and animal feeding stuffs. 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.

**Environmental exposure controls**

Avoid creating dust. 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** Solid

**Gas Under Pressure** Not classified according to GHS criteria

**Appearance** powder **Color** white

**Odor** Chlorine **Odor threshold** No data available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>Molecular weight</b>	No data available	
<b>pH</b>	12.33	5% Solution
<b>Melting point/freezing point</b>	> 240 °C / 464 °F	



<b>Boiling point / boiling range</b>	No data available
<b>Evaporation rate</b>	Not applicable
<b>Vapor pressure</b>	0.375 mm Hg / 0.05 kPa at 20 °C / 68 °F Estimation based on theoretical calculation
<b>Vapor density (air = 1)</b>	Not applicable NaN (air = 1)
<b>Specific gravity (water = 1 / air = 1)</b>	1.783
<b>Partition Coefficient (n-octanol/water)</b>	Not applicable
<b>Soil Organic Carbon-Water Partition Coefficient</b>	Not applicable
<b>Autoignition temperature</b>	No data available
<b>Decomposition temperature</b>	No data available
<b>Dynamic viscosity</b>	Not applicable
<b>Kinematic viscosity</b>	Not applicable

**Solubility(ies)**

**Water solubility**

<u>Water solubility classification</u>	<u>Water solubility</u>	<u>Water Solubility Temperature</u>
Soluble	No data available	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**

<b>Metal Corrosivity</b>	Classified as corrosive to metal according to GHS criteria
<b>GHS Metal Corrosivity Classification</b>	Category 1, H290
<b>Steel Corrosion Rate</b>	0 mm/yr / 0 in/yr
<b>Aluminum Corrosion Rate</b>	20.4 mm/yr / 0.8 in/yr
<b>Volatile Organic Compounds (VOC) Content</b>	Not applicable.
<b>Bulk density</b>	Not applicable
<b>Explosive properties</b>	Not classified according to GHS criteria.
<b>Explosion data</b>	No data available
<b>Upper explosion limit</b>	No data available
<b>Lower explosion limit</b>	No data available
<b>Flammable properties</b>	During a fire, irritating and highly toxic gases may be generated by thermal decomposition. Not classified as flammable according

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to GHS criteria.

#### **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.

## **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**

Thermal decomposition can lead to release of irritating and toxic gases and vapors.

#### **Explosive properties**

Not classified according to GHS criteria.

**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

<b>Product Information</b>	Corrosive to skin. Corrosive to eyes. May be harmful if swallowed.
<b>Inhalation</b>	Causes burns. Corrosive by inhalation.
<b>Eye contact</b>	Corrosive to the eyes and may cause severe damage including blindness. Causes burns. Corrosive to eyes.
<b>Skin contact</b>	Cause severe skin burns and eye damage. Causes burns.
<b>Ingestion</b>	Ingestion causes burns of the upper digestive and respiratory tracts. May be harmful if swallowed. Causes burns.
<b>Aggravated Medical Conditions</b>	Eye disorders. Skin disorders. Respiratory disorders.
<b>Toxicologically synergistic products</b>	None known.
<b>Toxicokinetics, metabolism and distribution</b>	See ingredients information below.

### Product Acute Toxicity Data

Test data reported below

#### Oral Exposure Route

Endpoint type	Reported dose	Key literature references and sources for data
Rat LD <sub>50</sub>	3613 mg/kg	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

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

<b>ATEmix (inhalation-dust/mist)</b>	39.34 mg/L
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### 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
Lithium hydroxide monohydrate (1 - 5%) CAS#: 1310-66-3	Rat LD <sub>50</sub>	225 mg/kg	None reported	None reported	IUCLID (The International Uniform Chemical Information Database)
Dichloroisocyanuric acid, sodium salt (1 - 5%) CAS#: 2893-78-9	Rat LD <sub>50</sub>	750 mg/kg	None reported	None reported	ERMA (New Zealand's Environmental Risk Management Authority) HSDB (Hazardous Substances Data Bank)

#### 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
Dichloroisocyanuric	Rabbit	> 10000	None	None reported	No information available

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acid, sodium salt (1 - 5%) CAS#: 2893-78-9	LD <sub>50</sub>	mg/kg	reported		
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**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
Lithium hydroxide monohydrate (1 - 5%) CAS#: 1310-66-3	Rat LC <sub>50</sub>	0.96 mg/L	4 hours	None reported	IUCLID (The International Uniform Chemical Information Database)
Dichloroisocyanuric acid, sodium salt (1 - 5%) CAS#: 2893-78-9	Rat LC <sub>50</sub>	12.5 mg/L	4 hours	None reported	IUCLID (The International Uniform Chemical Information Database)

**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**

If available, see data below

Chemical Name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Lithium hydroxide monohydrate (1 - 5%) CAS#: 1310-66-3	Existing human experience	Human	None reported	None reported	Corrosive to skin	ERMA (New Zealand's Environmental Risk Management Authority)
Dichloroisocyanuric acid, sodium salt (1 - 5%) CAS#: 2893-78-9	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**

If available, see data below

Chemical Name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Dichloroisocyanuric acid, sodium salt (1 - 5%) CAS#: 2893-78-9	Rinse Test	Rabbit	None reported	None reported	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.

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**Ingredient Sensitization Data**

**Skin Sensitization Exposure Route** If available, see data below.  
**Respiratory Sensitization Exposure Route** If available, see data below.

**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** 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

<b>Chemical Name</b>	<b>CAS No</b>	<b>ACGIH</b>	<b>IARC</b>	<b>NTP</b>	<b>OSHA</b>
Lithium hydroxide monohydrate	1310-66-3	-	-	-	-
Dichloroisocyanuric acid, sodium salt	2893-78-9	-	-	-	-

**Legend**

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

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Oral Exposure Route If available, see data below

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 *invitro* Data  
 No data available.

Ingredient Germ Cell Mutagenicity *invitro* Data If available, see data below

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 *invivo* 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 If available, see data below

Chemical Name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Dichloroisocyanuric acid, sodium salt (1 - 5%) CAS#: 2893-78-9	Mouse TD <sub>Lo</sub>	4000 mg/kg	9 days	<b>Effects on Newborn</b> Growth statistics (e.g. % reduced weight gain) Physical <b>Specific Developmental Abnormalities</b> Musculoskeletal system	RTECS (Registry of Toxic Effects of Chemical Substances)

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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

## 12. ECOLOGICAL INFORMATION

Ecotoxicity Harmful to aquatic life.

### 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
Dichloroisocyanuric acid, sodium salt (1 - 5%) CAS#: 2893-78-9	96 hours	<i>Oncorhynchus mykiss</i>	LC <sub>50</sub>	0.25 mg/L	PEEN (Pan European Ecological Network)

Crustacea If available, see ingredient data below

Chemical Name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Dichloroisocyanuric acid, sodium salt (1 - 5%) CAS#: 2893-78-9	48 Hours	<i>Daphnia magna</i>	LC <sub>50</sub>	0.28 mg/L	ECHA (The European Chemicals Agency) PEEN (Pan European Ecological Network)

Algae If available, see ingredient data below

#### Terrestrial toxicity

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

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### 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
Butanedioic acid, 2,3-dihydroxy-[R-(R*, R*)]-, disodium salt (7 - 13%) CAS#: 868-18-8	None reported	73%	14 days	Readily biodegradable

#### Bioaccumulation

None known.

#### **Product Bioaccumulation Data**

No data available.

#### **Ingredient Bioaccumulation Data**

No data available

### **Additional information**

#### Product Information

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

Not applicable

#### Ingredient Information

Chemical Name	Partition Coefficient (n-octanol/water)	Method
Dichloroisocyanuric acid, sodium salt (1 - 5%) CAS#: 2893-78-9	log K <sub>ow</sub> = -0.06	Estimation through KOWWIN v1.68 part of the Estimation Programs Interface (EPI) Suite™

#### Mobility

Mobility in soil: High mobility. If available, see ingredient data below.

#### **Product Information**

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

Not applicable

#### **Ingredient Information**

### Additional information

#### **Water solubility**

#### **Product Information**



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<u>Water solubility classification</u>	<u>Water solubility</u>	<u>Water Solubility Temperature</u>
Soluble	No data available	25 °C / 77 °F

#### Ingredient Information

<u>Chemical Name</u>	<u>Water solubility classification</u>	<u>Water solubility</u>	<u>Water solubility temperature °C</u>	<u>Water solubility temperature °F</u>
Lithium hydroxide monohydrate CAS#: 1310-66-3	Completely soluble	128000 mg/L	20 °C	68 °F
Dichloroisocyanuric acid, sodium salt CAS#: 2893-78-9	Completely soluble	227000 mg/L	25 °C	77 °F

#### Other adverse effects

No information available.

<u>Chemical Name</u>	<u>EU - Endocrine Disrupters Candidate List</u>	<u>EU - Endocrine Disruptors - Evaluated Substances</u>	<u>Endocrine disrupting potential</u>
Dichloroisocyanuric acid, sodium salt (1 - 5%) CAS#: 2893-78-9	Group III Chemical	-	-

### 13. DISPOSAL CONSIDERATIONS

#### Waste treatment methods

<b>Disposal of wastes</b>	Disposal should be in accordance with applicable regional, national, and local laws and regulations.
<b>Contaminated packaging</b>	Do not reuse container.
<b>US EPA Waste Number</b>	D002
<b>Special instructions for disposal</b>	Dilute to 3 to 5 times the volume with cold water. 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. Flush system with plenty of water.

### 14. TRANSPORT INFORMATION

#### U.S. DOT

<b>UN/ID no</b>	UN2680
<b>Proper shipping name</b>	Lithium Hydroxide Mixture
<b>Hazard Class</b>	8
<b>Packing Group</b>	II
<b>Marine pollutant</b>	This product contains a chemical which is listed as a marine pollutant according to DOT.
<b>Emergency Response Guide Number</b>	154

#### TDG

<b>UN/ID no</b>	UN2680
<b>Hazard Class</b>	8
<b>Packing Group</b>	II
<b>Marine pollutant</b>	This product contains a chemical which is listed as a severe marine pollutant according to TDG.

#### IATA

<b>UN/ID no</b>	UN2680
<b>Proper shipping name</b>	Lithium Hydroxide Mixture

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**Hazard Class** 8  
**Packing Group** II  
**ERG Code** 154

**IMDG**

**UN/ID no** UN2680  
**Proper shipping name** Lithium Hydroxide Mixture  
**Hazard Class** 8  
**Packing Group** II

**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**

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** Yes  
**Fire hazard** No  
**Sudden release of pressure hazard** No  
**Reactive Hazard** No

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#### 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)

#### 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

#### 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
Lithium hydroxide monohydrate 1310-66-3	X	-	-
Dichloroisocyanuric acid, sodium salt 2893-78-9	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)**

Chemical Name	Global Automotive Declarable Substance List Classifications	Global Automotive Declarable Substance List Thersholds
Dichloroisocyanuric acid, sodium salt 2893-78-9	Declarable Substance (LR) Prohibited Substance (LR)	0.0 %

#### NFPA and HMIS Classifications

NFPA	Health hazards - 3	Flammability - 0	Instability - 0	Physical and Chemical Properties -
HMIS	Health hazards - 3	Flammability - 0	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  
ACGIH  
NDF

*Immediately Dangerous to Life or Health*  
ACGIH (American Conference of Governmental Industrial Hygienists)  
*no data*

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

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

**Prepared By** Hach Product Compliance Department

**Issue Date** 05-Oct-2016

**Revision Date** 01-Dec-2016

**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.**

**HACH COMPANY©2017**

**End of Safety Data Sheet**

# MATERIAL SAFETY DATA SHEET

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## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** AmVer™ Diluent Reagent LR for Nitrogen, Ammonia  
**Catalog Number:** 2602200

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

Emergency Telephone Numbers:  
(Medical and Transportation)  
(303) 623-5716 24 Hour Service  
(515)232-2533 8am - 4pm CST

**MSDS Number:** M01132  
**Chemical Name:** Not applicable  
**TSCA CAS Number:** Not applicable  
**Alternate CAS No. (for hydrated forms):** Not applicable  
NA  
**Chemical Formula:** Not applicable  
**Chemical Family:** Not applicable  
**Intended Use:** Laboratory Reagent

---

## 2. HAZARDS IDENTIFICATION

**GHS Classification:**  
**Hazard categories:** Serious Eye Damage/Eye Irritation: Eye Irrit. 2A  
**GHS Label Elements:**  
Warning



**Hazard statements:** H319: Causes serious eye irritation.  
**Precautionary statements:** P264: Wash thoroughly after handling. P280: Wear protective gloves/protective clothing/eye protection/face protection. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337+P313 If eye irritation persists: Get medical advice/attention.

**HMIS:**  
**Health:** 1  
**Flammability:** 0  
**Reactivity:** 0  
**Protective Equipment:** X - See protective equipment, Section 8.

**NFPA:**  
**Health:** 1  
**Flammability:** 0  
**Reactivity:** 0  
**Symbol:** Not applicable

**WHMIS Hazard Classification:** Class D, Division 2, Subdivision B - Toxic material (other toxic effects)  
**WHMIS Symbols:** Other Toxic Effects

---

## 3. COMPOSITION / INFORMATION ON INGREDIENTS

**Hazardous Components per Regulation (EC) No. 1272/2008:**  
Sodium Salicylate

**TSCA CAS Number:** 54-21-7  
**Chemical Formula:** C<sub>7</sub>H<sub>5</sub>O<sub>3</sub>Na  
**GHS Classification:** Acute Tox. Or1 4, H302; Skin Irrit. 2, H315; Eye Dam. 1, H318; STOT Single 3, H335  
**Percent Range:** 1.0 - 5.0  
**Percent Range Units:** weight / weight  
**PEL:** 15 mg/m<sup>3</sup> as inhalable dust; 5 mg/m<sup>3</sup> as respirable dust  
**TLV:** 10 mg/m<sup>3</sup> as inhalable dust; 3 mg/m<sup>3</sup> as respirable dust

**WHMIS Symbols:** Other Toxic Effects

#### **Sodium Hydroxide**

**TSCA CAS Number:** 1310-73-2  
**Chemical Formula:** NaOH  
**GHS Classification:** Met. Corr.1, H290; Skin Corr. 1A, H314; Aquatic Acute 3, H402  
**Percent Range:** < 0.01  
**Percent Range Units:** weight / weight  
**PEL:** 2 mg/m<sup>3</sup>  
**TLV:** Not established

**WHMIS Symbols:** Acute Poison Corrosive

**Hazardous Components per Regulation (EC) No. 1272/2008:** No

#### **Demineralized Water**

**TSCA CAS Number:** 7732-18-5  
**Chemical Formula:** H<sub>2</sub>O  
**GHS Classification:** Not a dangerous substance according to GHS.  
**Percent Range:** >95.0  
**Percent Range Units:** weight / weight  
**PEL:** Not established  
**TLV:** Not established

**WHMIS Symbols:** Not applicable

---

## **4. FIRST AID**

**General Information:** In the event of exposure, show this Material Safety Data Sheet and label (where possible) to a doctor.

**Advice to doctor:** Treat symptomatically.

**Eye Contact:** Immediately flush eyes with water for 15 minutes. Call physician immediately.

**Skin Contact (First Aid):** Wash skin with soap and plenty of water. Call physician if irritation develops. Remove contaminated clothing, wash before reuse, and do not allow out of workplace.

**Inhalation:** Remove to fresh air.

**Ingestion (First Aid):** Do not induce vomiting. Call physician immediately. Give large quantities of water. Never give anything by mouth to an unconscious person.

---

## **5. FIRE FIGHTING MEASURES**

**Flammable Properties:** Material will not burn.

**Fire Fighting Instruction:** As in any fire, wear self-contained breathing apparatus pressure-demand and full protective gear. Evacuate area and fight fire from a safe distance.

**Extinguishing Media:** Use media appropriate to surrounding fire conditions

**Extinguishing Media NOT To Be Used:** Not applicable

**Fire / Explosion Hazards:** None reported

**Hazardous Combustion Products:** This material will not burn.

---

## **6. ACCIDENTAL RELEASE MEASURES**

**Spill Response 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.

**Containment Technique:** Stop spilled material from being released to the environment.

**Clean-up Technique:** If permitted by regulation, Cover spilled material with a dry acid, such as citric or boric. Scoop up slurry into a large beaker. Adjust to a pH between 6 and 9. Use sulfuric or citric acid to lower pH. Use soda ash or sodium bicarbonate to increase pH. Flush reacted material to the drain with a large excess of water. Otherwise, Decontaminate the area of the spill with a soap solution. Dispose of in accordance with local, state and federal regulations or laws.

**Evacuation Procedure:** Evacuate as needed to perform spill clean-up.

**DOT Emergency Response Guide Number:** Not applicable

---

## 7. HANDLING / STORAGE

**Handling:** Avoid contact with eyes skin Wash thoroughly after handling. Maintain general industrial hygiene practices when using this product.

**Storage:** Keep container tightly closed when not in use.

**Flammability Class:** Not applicable

---

## 8. EXPOSURE CONTROLS / PROTECTIVE EQUIPMENT

**Engineering Controls:** Have an eyewash station nearby. Use general ventilation to minimize exposure to mist, vapor or dust. Maintain general industrial hygiene practices when using this product.

**Personal Protective Equipment:**

**Eye Protection:** safety glasses with top and side shields

**Skin Protection:** disposable latex gloves

**Inhalation Protection:** adequate ventilation

**Precautionary Measures:** Avoid contact with: eyes skin Do not breathe: dust Wash thoroughly after handling. Use with adequate ventilation.

**TLV:** Not established

**PEL:** Not established

**For Occupational Exposure Limits (OEL) for ingredients, see section 3 - Composition/Information on Ingredients.:**

---

## 9. PHYSICAL / CHEMICAL PROPERTIES

**Appearance:** Clear, colorless liquid

**Physical State:** Liquid

**Molecular Weight:** Not applicable

**Odor:** Not determined

**Odor Threshold:** Not determined

**pH:** 11.4

**Metal Corrosivity:**

**Corrosivity Classification:** Not classified as corrosive to metals according to GHS criteria.

**Steel:** 0.00 in/yr

**Aluminum:** 0.036 in/yr

**Specific Gravity/Relative Density (water = 1; air =1):** 1.010

**Viscosity:** 1.0 mm<sup>2</sup>/s

**Solubility:**

**Water:** Miscible

**Acid:** Miscible

**Other:** Not determined

**Partition Coefficient (n-octanol / water):** Not applicable

**Coefficient of Water / Oil:** Not applicable

**Melting Point:** ~ 0 °C

**Decomposition Temperature:** Not applicable

**Boiling Point:** 99 °C

**Vapor Pressure:** Not applicable  
**Vapor Density (air = 1):** Not applicable  
**Evaporation Rate (water = 1):** ~ 1  
**Volatile Organic Compounds Content:** Not applicable  
**Flammable Properties:** Material will not burn.  
**Flash Point:** Not applicable  
**Method:** Not applicable  
**Flammability Limits:**  
**Lower Explosion Limits:** Not applicable  
**Upper Explosion Limits:** Not applicable  
**Autoignition Temperature:** Not applicable  
**Explosive Properties:**  
Not classified according to GHS criteria.  
**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.  
**Gas under Pressure:**  
Not classified according to GHS

---

## 10. STABILITY / REACTIVITY

**Chemical Stability:** Stable when stored under proper conditions.  
**Mechanical Impact:** None reported  
**Static Discharge:** None reported.  
**Reactivity/Incompatibility:** Incompatible with: acids iodine iron salts lead acetate oxidizers Silver Nitrate sodium phosphate  
**Hazardous Decomposition:** Toxic fumes of: carbon dioxide carbon monoxide  
**Conditions to Avoid:** Extreme temperatures Exposure to light. Excess moisture

---

## 11. TOXICOLOGICAL INFORMATION

**Toxicokinetics, Metabolism and Distribution:** No information was found for this substance.  
**Toxicologically Synergistic Products:** None reported  
**Acute Toxicity:** Based on classification principles, the classification criteria are not met.  
**Specific Target Organ Toxicity - Single Exposure (STOT-SE):** Based on classification principles, the classification criteria are not met.  
**Specific Target Organ Toxicity - Repeat Exposure (STOT-RE):** Based on classification principles, the classification criteria are not met.  
**Skin Corrosion/Irritation:** Based on classification principles, the classification criteria are not met.  
**Eye Damage:** Irritating to eyes.  
**Sensitization:** Based on classification principles, the classification criteria are not met.  
**Carcinogenic, Mutagenic or Reproductive Toxin Effects:** No germ cell mutagenicity, carcinogenicity or reproductive toxicity data found.  
This product does NOT contain any NTP listed chemicals.  
This product does NOT contain any OSHA listed carcinogens.  
**Symptoms/Effects:**  
**Ingestion (EC):** May cause: irritation of the mouth and esophagus Very large doses may cause: headache dizziness ringing in the ears (tinnitus) blurred vision confusion drowsiness thirst nausea vomiting diarrhea convulsions coma  
**Inhalation (EC):** No effects anticipated  
**Skin Absorption (EC):** Will be absorbed through the skin. Effects similar to those of ingestion  
**Chronic Effects:** Salicylates may cause ringing in the ears (tinnitus), abnormal bleeding, gastric ulceration, mental deterioration, skin eruption, temporary vision loss, and other optical effects. eye irritation  
**Medical Conditions Aggravated:** Allergies or sensitivity to aspirin or salicylates.

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## 12. ECOLOGICAL INFORMATION

**Product Ecological Information:** --

No ecological data available for this product. Based on classification principles, not classified as hazardous to the environment.

**Ingredient Ecological Information:** --

Ecological data for ingredients is not indicative of likely ecological harm. CEPA categorization for each and every ingredient: Not Persistent or Bioaccumulative. Not inherently toxic to aquatic organisms.

---

## 13. DISPOSAL CONSIDERATIONS

**EPA Waste ID Number:** Not applicable

**Special Instructions (Disposal):** Working in small batches, dilute to 3 to 5 times the volume with cold water. 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.

**Empty Containers:** Rinse three times with an appropriate solvent. Dispose of empty container as normal trash.

**NOTICE (Disposal):** These disposal guidelines are based on federal regulations and may be superseded by more stringent state or local requirements. Please consult your local environmental regulators for more information. In Europe: Chemical and analysis solutions must be disposed of in compliance with the respective national regulations. Product packaging must be disposed of in compliance with the country-specific regulations or must be passed to a packaging return system.

---

## 14. TRANSPORT INFORMATION

**D.O.T.:**

**D.O.T. Proper Shipping Name:** Not Currently Regulated

--

**DOT Hazard Class:** NA

**DOT Subsidiary Risk:** NA

**DOT ID Number:** NA

**DOT Packing Group:** NA

**T.D.G.:**

**T.D.G. Proper Shipping Name:** Not Currently Regulated

--

**T.D.G. Hazard Class:** NA

**T.D.G. Subsidiary Risk:** NA

**PIN:** NA

**Group:** NA

**I.C.A.O.:**

**I.C.A.O. Proper Shipping Name:** Not Currently Regulated

--

**ICAO Hazard Class:** NA

**ICAO Subsidiary Risk:** NA

**ICAO ID Number:** NA

**ICAO Packing Group:** NA

**I.M.O.:**

**I.M.O. Proper Shipping Name:** Not Currently Regulated

--

**I.M.O. Hazard Class:** NA

**I.M.O. Subsidiary Risk:** NA

**I.M.O. ID Number:** NA

**I.M.O. Packing Group:** NA

**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 set or kit, the classification given above applies. If the item IS part of a set or kit, the classification would change to the following: UN3316 Chemical Kit, Class 9, PG II or III. If the item is not regulated, the Chemical Kit classification does not apply.

---

## 15. REGULATORY INFORMATION

### **U.S. Federal Regulations:**

**O.S.H.A.:** This product meets the criteria for a hazardous substance as defined in the Hazard Communication Standard. (29 CFR 1910.1200)

### **E.P.A.:**

**S.A.R.A. Title III Section 311/312 Categorization (40 CFR 370):** Immediate (Acute) Health Hazard

**S.A.R.A. Title III Section 313 (40 CFR 372):** This product does NOT contain any chemical subject to the reporting requirements of Section 313 of Title III of SARA.

**302 (EHS) TPQ (40 CFR 355):** Not applicable

**304 CERCLA RQ (40 CFR 302.4):** Sodium Hydroxide 1000 lbs.

**304 EHS RQ (40 CFR 355):** Not applicable

**Clean Water Act (40 CFR 116.4):** Sodium Hydroxide - RQ = 1000 lbs. (454 kgs.)

**RCRA:** Contains no RCRA regulated substances.

### **State Regulations:**

**California Prop. 65:** No Prop. 65 listed chemicals are present in this product.

**Identification of Prop. 65 Ingredient(s):** Not applicable

**California Perchlorate Rule CCR Title 22 Chap 33:** No

**Trade Secret Registry:** Not applicable

### **National Inventories:**

**U.S. Inventory Status:** All ingredients in this product are listed on the TSCA 8(b) Inventory (40 CFR 710).

**TSCA CAS Number:** Not applicable

**Canadian Inventory Status:** All ingredients of this product are DSL Listed.

**EEC Inventory Status:** All ingredients used to make this product are listed on EINECS / ELINCS.

**Australian Inventory Status:** All ingredients of this product are AICS Listed.

**New Zealand (ERMA) Inventory Status:** LISTED: All components of this product are either listed, exempt or excluded.

**Korean (TCCL) Inventory Status:** LISTED: All components of this product are either listed, listed as the anhydrous compound or exempt.

**Japan (CHRIP) Inventory Status:** LISTED: All components of this product are either listed, exempt or excluded.

**China (PRC) Inventory Status:** LISTED: All components of this product are either listed or exempt.

---

## 16. OTHER INFORMATION

**References:** Vendor Information. TLV's Threshold Limit Values and Biological Exposure Indices for 1992-1993. American Conference of Governmental Industrial Hygienists, 1992. Technical Judgment. Sixth Annual Report on Carcinogens, 1991. U.S. Department of Health and Human Services. Rockville, MD: Technical Resources, Inc. 1991. Sax, N. Irving. Dangerous Properties of Industrial Materials, 7th Ed. New York: Van Nostrand Reinhold Co., 1989. List of Dangerous Substances Classified in Annex I of the EEC Directive (67/548) - Classification, Packaging and Labeling of Dangerous Substances, Amended July 1992. IARC Monographs on the Evaluation of the Carcinogenic Risks to Humans. World Health Organization (Volumes 1-42) Supplement 7. France: 1987. CCINFO RTECS. Canadian Centre for Occupational Health and Safety. Hamilton, Ontario Canada: 30 June 1993. Air Contaminants, Federal Register, Vol. 54, No. 12. Thursday, January 19, 1989. pp. 2332-2983. 29 CFR 1900 - 1910 (Code of Federal Regulations - Labor).

**Complete Text of H phrases referred to in Section 3:** H290 May be corrosive to metals. H302 Harmful if swallowed. H314 Causes severe skin burns and eye damage. H315 Causes skin irritation. H318 Causes serious eye damage. H335 May cause respiratory irritation. H402 Harmful to aquatic life.

**Revision Summary:** Substantial revision to comply with EU Reg 1272/2008, Reg 1907/2006 and UN GHS (ST/SG/AC.10/36/Add.3).

### **Date of MSDS Preparation:**

**Day:** 11

**Month:** May

**Year:** 2015

**MSDS Prepared:** MSDS prepared by Product Compliance Department extension 3350

**CCOHS Evaluation Note:** It is offered under exemption from WHMIS labeling as specified in the Controlled Products Regulation (CPR) Section 17. It is offered under the interim policy that was established by Health Canada permitting use of GHS-formatted safety data sheets in Canada prior to revision of CPR to GHS.

**WHMIS Evaluation Note:** This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

---

**Legend:**

NA - Not Applicable	w/w - weight/weight
ND - Not Determined	w/v - weight/volume
NV - Not Available	v/v - volume/volume

**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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# SAFETY DATA SHEET

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## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** AmVer™ Diluent Reagent LR for Nitrogen, Ammonia  
**Catalog Number:** 2604545VIAL

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

Emergency Telephone Numbers:  
(Medical and Transportation)  
(303) 623-5716 24 Hour Service  
(515)232-2533 8am - 4pm CST

**MSDS Number:** M01132  
**Chemical Name:** Not applicable  
**CAS Number:** Not applicable  
**Additional CAS No. (for hydrated forms):** Not applicable  
NA  
**Chemical Formula:** Not applicable  
**Chemical Family:** Not applicable  
**Intended Use:** Laboratory Reagent

---

## 2. HAZARDS IDENTIFICATION

**GHS Classification:**  
**Hazard categories:** Serious Eye Damage/Eye Irritation: Eye Irrit. 2A  
**GHS Label Elements:**  
WARNING



**Hazard statements:** Causes serious eye irritation.  
**Precautionary statements:** Wash thoroughly after handling. Wear protective gloves / protective clothing / eye protection / face protection. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

**HMIS:**  
**Health:** 1  
**Flammability:** 0  
**Reactivity:** 0  
**Protective Equipment:** X - See protective equipment, Section 8.

**NFPA:**  
**Health:** 1  
**Flammability:** 0  
**Reactivity:** 0  
**Symbol:** Not applicable

**WHMIS Hazard Classification:** Class D, Division 2, Subdivision B - Toxic material (other toxic effects)  
**WHMIS Symbols:** Other Toxic Effects

---

## 3. COMPOSITION / INFORMATION ON INGREDIENTS

**Hazardous Components according to GHS:**  
**Sodium Salicylate**

**CAS Number:** 54-21-7

**Chemical Formula:** C<sub>7</sub>H<sub>5</sub>O<sub>3</sub>Na  
**GHS Classification:** Acute Tox. Or1 4, H302; Skin Irrit. 2, H315; Eye Dam. 1, H318; STOT Single 3, H335  
**Percent Range (Trade Secret):** 1.0 - 5.0  
**Percent Range Units:** weight / weight  
**PEL:** 15 mg/m<sup>3</sup> as inhalable dust; 5 mg/m<sup>3</sup> as respirable dust  
**TLV:** 10 mg/m<sup>3</sup> as inhalable dust; 3 mg/m<sup>3</sup> as respirable dust

**WHMIS Symbols:** Other Toxic Effects

#### **Sodium Hydroxide**

**CAS Number:** 1310-73-2  
**Chemical Formula:** NaOH  
**GHS Classification:** Met. Corr.1, H290; Skin Corr. 1A, H314; Aquatic Acute 3, H402  
**Percent Range (Trade Secret):** < 0.01  
**Percent Range Units:** weight / weight  
**PEL:** 2 mg/m<sup>3</sup>  
**TLV:** Not established

**WHMIS Symbols:** Acute Poison Corrosive

**Hazardous Components according to GHS:** No  
**Demineralized Water**

**CAS Number:** 7732-18-5  
**Chemical Formula:** H<sub>2</sub>O  
**GHS Classification:** Not a dangerous substance according to GHS.  
**Percent Range (Trade Secret):** >95.0  
**Percent Range Units:** weight / weight  
**PEL:** Not established  
**TLV:** Not established

**WHMIS Symbols:** Not applicable

---

## **4. FIRST AID MEASURES**

**General Information:** In the event of exposure, show this Material Safety Data Sheet and label (where possible) to a doctor.

**Advice to doctor:** Treat symptomatically.

**Eye Contact:** Immediately flush eyes with water for 15 minutes. Call physician immediately.

**Skin Contact (First Aid):** Wash skin with soap and plenty of water. Call physician if irritation develops. Remove contaminated clothing.

**Inhalation:** Remove to fresh air.

**Ingestion (First Aid):** Do not induce vomiting. Call physician immediately. Give large quantities of water. Never give anything by mouth to an unconscious person.

---

## **5. FIRE FIGHTING MEASURES**

**Flammable Properties:** Material will not burn.

**Fire Fighting Instruction:** As in any fire, wear self-contained breathing apparatus pressure-demand and full protective gear. Evacuate area and fight fire from a safe distance.

**Extinguishing Media:** Use media appropriate to surrounding fire conditions

**Extinguishing Media NOT To Be Used:** Not applicable

**Fire / Explosion Hazards:** None reported

**Hazardous Combustion Products:** This material will not burn.

---

## **6. ACCIDENTAL RELEASE MEASURES**

**Spill Response 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.

**Containment Technique:** Stop spilled material from being released to the environment.

**Clean-up Technique:** If permitted by regulation, Cover spilled material with a dry acid, such as citric or boric. Scoop up slurry into a large beaker. Adjust to a pH between 6 and 9. Use sulfuric or citric acid to lower pH. Use soda ash or sodium bicarbonate to increase pH. Flush reacted material to the drain with a large excess of water. Otherwise, Decontaminate the area of the spill with a soap solution. Dispose of in accordance with local, state and federal regulations or laws.

**Evacuation Procedure:** Evacuate as needed to perform spill clean-up.

**DOT Emergency Response Guide Number:** Not applicable

---

## 7. HANDLING AND STORAGE

**Handling:** Avoid contact with eyes skin Wash thoroughly after handling. Maintain general industrial hygiene practices when using this product.

**Storage:** Keep container tightly closed when not in use.

**Flammability Class:** Not applicable

---

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Engineering Controls:** Have an eyewash station nearby. Use general ventilation to minimize exposure to mist, vapor or dust. Maintain general industrial hygiene practices when using this product.

**Personal Protective Equipment:**

**Eye Protection:** safety glasses with top and side shields

**Skin Protection:** disposable latex gloves

**Inhalation Protection:** adequate ventilation

**Precautionary Measures:** Avoid contact with: eyes skin Do not breathe: dust Wash thoroughly after handling. Use with adequate ventilation.

**TLV:** Not established

**PEL:** Not established

**For Occupational Exposure Limits (OEL) for ingredients, see section 3 - Composition/Information on Ingredients.:**

---

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance:** Clear, colorless liquid

**Physical State:** Liquid

**Molecular Weight:** Not applicable

**Odor:** Not determined

**Odor Threshold:** Not determined

**pH:** 11.4

**Metal Corrosivity:**

**Corrosivity Classification:** Not classified as corrosive to metals according to GHS criteria.

**Steel:** 0.00 in/yr

**Aluminum:** 0.036 in/yr

**Specific Gravity/ Relative Density (water = 1; air =1):** 1.010

**Viscosity:** 1.0 mm<sup>2</sup>/s

**Solubility:**

**Water:** Miscible

**Acid:** Miscible

**Other:** Not determined

**Partition Coefficient (n-octanol / water):** Not applicable

**Coefficient of Water / Oil:** Not applicable

**Melting Point:** ~ 0 °C

**Decomposition Temperature:** Not applicable

**Boiling Point:** 99 °C

**Vapor Pressure:** Not applicable

**Vapor Density (air = 1):** Not applicable  
**Evaporation Rate (water = 1):** ~ 1  
**Volatile Organic Compounds Content:** Not applicable  
**Flammable Properties:** Material will not burn.  
**Flash Point:** Not applicable  
**Method:** Not applicable  
**Flammability Limits:**  
**Lower Explosion Limits:** Not applicable  
**Upper Explosion Limits:** Not applicable  
**Autoignition Temperature:** Not applicable  
**Explosive Properties:**  
Not classified according to GHS criteria.  
**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.  
**Gas under Pressure:**  
Not classified according to GHS criteria.

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## 10. STABILITY AND REACTIVITY

**Chemical Stability:** Stable when stored under proper conditions.  
**Mechanical Impact:** None reported  
**Static Discharge:** None reported.  
**Reactivity / Incompatibility:** Incompatible with: acids iodine iron salts lead acetate oxidizers Silver Nitrate sodium phosphate  
**Hazardous Decomposition:** Toxic fumes of: carbon dioxide carbon monoxide  
**Conditions to Avoid:** Extreme temperatures Exposure to light. Excess moisture

---

## 11. TOXICOLOGICAL INFORMATION

**Toxicokinetics, Metabolism and Distribution:** No information available  
**Toxicologically Synergistic Products:** None reported  
**Acute Toxicity:** Based on classification principles, the classification criteria are not met.  
**Specific Target Organ Toxicity - Single Exposure (STOT-SE):** Based on classification principles, the classification criteria are not met.  
**Specific Target Organ Toxicity - Repeat Exposure (STOT-RE):** Based on classification principles, the classification criteria are not met.  
**Skin Corrosion/Irritation:** Based on classification principles, the classification criteria are not met.  
**Eye Damage:** Irritating to eyes.  
**Sensitization:** Based on classification principles, the classification criteria are not met.  
**CMR Effects/Properties (carcinogenic, mutagenic or toxic to reproduction):** No germ cell mutagenicity, carcinogenicity or reproductive toxicity data found.  
This product does NOT contain any NTP listed chemicals.  
This product does NOT contain any OSHA listed carcinogens.  
**Symptoms/Effects:**  
**Ingestion:** May cause: irritation of the mouth and esophagus Very large doses may cause: headache dizziness ringing in the ears (tinnitus) blurred vision confusion drowsiness thirst nausea vomiting diarrhea convulsions coma  
**Inhalation:** No effects anticipated  
**Skin Absorption:** Will be absorbed through the skin. Effects similar to those of ingestion  
**Chronic Effects:** Salicylates may cause ringing in the ears (tinnitus), abnormal bleeding, gastric ulceration, mental deterioration, skin eruption, temporary vision loss, and other optical effects. eye irritation  
**Medical Conditions Aggravated:** Allergies or sensitivity to aspirin or salicylates.

---

## 12. ECOLOGICAL INFORMATION

**Product Ecological Information: --**

No ecological data available for this product. Based on classification principles, not classified as hazardous to the environment.

**Ingredient Ecological Information: --**

Ecological data for ingredients is not indicative of likely ecological harm. CEPA categorization for each and every ingredient: Not Persistent or Bioaccumulative. Not inherently toxic to aquatic organisms.

---

### 13. DISPOSAL CONSIDERATIONS

**EPA Waste ID Number:** Not applicable

**Special Instructions (Disposal):** Working in small batches, dilute to 3 to 5 times the volume with cold water. 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.

**Empty Containers:** Rinse three times with an appropriate solvent. Dispose of empty container as normal trash.

**NOTICE (Disposal):** These disposal guidelines are based on federal regulations and may be superseded by more stringent state or local requirements. Please consult your local environmental regulators for more information. In Europe: Chemical and analysis solutions must be disposed of in compliance with the respective national regulations. Product packaging must be disposed of in compliance with the country-specific regulations or must be passed to a packaging return system.

---

### 14. TRANSPORT INFORMATION

**D.O.T.:**

**D.O.T. Proper Shipping Name:** Not Currently Regulated

--

**Hazard Class:** NA

**Subsidiary Risk:** NA

**ID Number:** NA

**Packing Group:** NA

**T.D.G.:**

**Proper Shipping Name:** Not Currently Regulated

--

**Hazard Class:** NA

**Subsidiary Risk:** NA

**UN Number/PIN:** NA

**Packing Group:** NA

**I.C.A.O.:**

**I.C.A.O. Proper Shipping Name:** Not Currently Regulated

--

**Hazard Class:** NA

**Subsidiary Risk:** NA

**ID Number:** NA

**Packing Group:** NA

**I.M.O.:**

**Proper Shipping Name:** Not Currently Regulated

--

**Hazard Class:** NA

**Subsidiary Risk:** NA

**ID Number:** NA

**Packing Group:** NA

**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 set or kit, the classification given above applies. If the item IS part of a set or kit, the classification would change to the following: UN3316 Chemical Kit, Class 9, PG II or III. If the item is not regulated, the Chemical Kit classification does not apply.

---



## 15. REGULATORY INFORMATION

### **U.S. Federal Regulations:**

**O.S.H.A.:** This product meets the criteria for a hazardous substance as defined in the Hazard Communication Standard. (29 CFR 1910.1200)

### **E.P.A.:**

**S.A.R.A. Title III Section 311/312 Categorization (40 CFR 370):** Immediate (Acute) Health Hazard

**S.A.R.A. Title III Section 313 (40 CFR 372):** This product does NOT contain any chemical subject to the reporting requirements of Section 313 of Title III of SARA.

**302 (EHS) TPQ (40 CFR 355):** Not applicable

**304 CERCLA RQ (40 CFR 302.4):** Sodium Hydroxide 1000 lbs.

**304 EHS RQ (40 CFR 355):** Not applicable

**Clean Water Act (40 CFR 116.4):** Sodium Hydroxide - RQ = 1000 lbs. (454 kgs.)

**RCRA:** Contains no RCRA regulated substances.

### **State Regulations:**

**California Prop. 65:** No Prop. 65 listed chemicals are present in this product.

**Identification of Prop. 65 Ingredient(s):** Not applicable

**California Perchlorate Rule CCR Title 22 Chap 33:** No

**Trade Secret Registry:** Not applicable

### **National Inventories:**

**U.S. Inventory Status:** All ingredients in this product are listed on the TSCA 8(b) Inventory (40 CFR 710).

**CAS Number:** Not applicable

**Canadian Inventory Status:** All ingredients of this product are DSL Listed.

**EEC Inventory Status:** All ingredients used to make this product are listed on EINECS / ELINCS.

**Australian Inventory (AICS) Status:** All ingredients are listed.

**New Zealand Inventory (NZIoC) Status:** All components either listed or exempt.

**Korean Inventory (KECI) Status:** All components of this product are either listed, listed as the anhydrous compound or exempt.

**Japan (ENCS) Inventory Status:** All components either listed or exempt.

**China (PRC) Inventory (MEP) Status:** All components either listed or exempt.

---

## 16. OTHER INFORMATION

**References:** Vendor Information. TLV's Threshold Limit Values and Biological Exposure Indices for 1992-1993. American Conference of Governmental Industrial Hygienists, 1992. Technical Judgment. Sixth Annual Report on Carcinogens, 1991. U.S. Department of Health and Human Services. Rockville, MD: Technical Resources, Inc. 1991. Sax, N. Irving. Dangerous Properties of Industrial Materials, 7th Ed. New York: Van Nostrand Reinhold Co., 1989. List of Dangerous Substances Classified in Annex I of the EEC Directive (67/548) - Classification, Packaging and Labeling of Dangerous Substances, Amended July 1992. IARC Monographs on the Evaluation of the Carcinogenic Risks to Humans. World Health Organization (Volumes 1-42) Supplement 7. France: 1987. CCINFO RTECS. Canadian Centre for Occupational Health and Safety. Hamilton, Ontario Canada: 30 June 1993. Air Contaminants, Federal Register, Vol. 54, No. 12. Thursday, January 19, 1989. pp. 2332-2983. 29 CFR 1900 - 1910 (Code of Federal Regulations - Labor).

**Complete Text of H phrases referred to in Section 3:** H290 May be corrosive to metals. H302 Harmful if swallowed. H314 Causes severe skin burns and eye damage. H315 Causes skin irritation. H318 Causes serious eye damage. H335 May cause respiratory irritation.

**Revision Summary:** Substantial revision to comply with EU Reg 1272/2008, Reg 1907/2006 and UN GHS (ST/SG/AC.10/36/Add.3).

### **Date of MSDS Preparation:**

**Day:** 11

**Month:** May

**Year:** 2015

**MSDS Prepared:** MSDS prepared by Product Compliance Department extension 3350

**CCOHS Evaluation Note:** It is offered under exemption from WHMIS labeling as specified in the Controlled Products Regulation (CPR) Section 17. It is offered under the interim policy that was established by Health Canada permitting use of GHS-formatted safety data sheets in Canada prior to revision of CPR to GHS.

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

Page 7  
Date Printed 10/28/15  
MSDS No: M01132

**Legend:**

NA - Not Applicable	w/w - weight/weight
ND - Not Determined	w/v - weight/volume
NV - Not Available	v/v - volume/volume

**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.**

**HACH COMPANY ©2015**