



**Be Right™**

# SAFETY DATA SHEET

Issue Date 14-Jul-2016

Revision Date 04-Apr-2017

Version 1.1

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## 1. IDENTIFICATION

### Product identifier

**Product Name** Nitrate Nitrogen Standard Solution 1000 ± 10 mg/l

### Other means of identification

**Product Code(s)** 1279249

**Safety data sheet number** M01261

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

**Recommended Use** Standard solution.

**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)

Carcinogenicity	Category 2
Reproductive toxicity	Category 2

#### **Hazards not otherwise classified (HNOC)**

Not applicable

#### **Label elements**

**Signal word - Warning**



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**Hazard statements**

H351 - Suspected of causing cancer

H361 - Suspected of damaging fertility or the unborn child

**Precautionary statements**

P201 - Obtain special instructions before use

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

P281 - Use personal protective equipment as required

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

P405 - Store locked up

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

**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 #
Potassium nitrate	7757-79-1	0.1 - 1%	-
Chloroform	67-66-3	0.1 - 1%	-

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## 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.
<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. If eye irritation persists: Get medical advice/attention.
<b>Skin contact</b>	For minor skin contact, avoid spreading material on unaffected skin. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. Remove and isolate contaminated clothing and shoes. Call a POISON CENTER or doctor if you feel unwell. If skin irritation persists, call a physician.
<b>Inhalation</b>	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell.
<b>Ingestion</b>	IF SWALLOWED: Rinse Mouth. If symptoms persist, call a physician.
<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.

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

**Symptoms** See Section 11: TOXICOLOGICAL INFORMATION.

### Indication of any immediate medical attention and special treatment needed

**Note to physicians** Treat symptomatically.

## 5. FIRE-FIGHTING MEASURES

### Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

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

### Flammable properties

Material is not classified as flammable according to GHS criteria. Substance does not burn.

### Specific hazards arising from the chemical

This product will not burn or explode.

### Hazardous combustion products

This material will not burn.

### 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.

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## 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

See Section 12 for additional ecological information.

### Methods and material for containment and cleaning up

#### Methods for containment

Prevent further leakage or spillage if safe to do so. Dike far ahead of liquid spill for later disposal.

#### Methods for cleaning up

Neutralize spill if necessary. Soak up with inert absorbent material. Take up mechanically, placing in appropriate containers for disposal. Clean contaminated surface thoroughly. Dispose of in accordance with local, state and federal regulations or laws.

#### Emergency Response Guide Number

Not applicable

## 7. HANDLING AND STORAGE

### Precautions for safe handling

#### Advice on safe handling

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 containers tightly closed in a dry, cool and well-ventilated place. Keep in properly labeled containers.

#### Flammability class

Not applicable

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

#### Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
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Chloroform 0.1 - 1%	TWA: 10 ppm	(vacated) TWA: 2 ppm (vacated) TWA: 9.78 mg/m <sup>3</sup> Ceiling: 50 ppm Ceiling: 240 mg/m <sup>3</sup>	IDLH: 500 ppm STEL: 2 ppm 60 min STEL: 9.78 mg/m <sup>3</sup> 60 min
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Chemical Name	Alberta OEL	British Columbia OEL	Manitoba OEL	New Brunswick OEL	New Foundland & Labrador OEL
Chloroform 0.1 - 1%	TWA: 10 ppm TWA: 49 mg/m <sup>3</sup>	TWA: 2 ppm R	TWA: 10 ppm	TWA: 10 ppm TWA: 49 mg/m <sup>3</sup>	TWA: 10 ppm

Chemical Name	Northwest Territories OEL	Nova Scotia OEL	Nunavut OEL	Ontario TWA	Prince Edward Island OEL
Chloroform 0.1 - 1%	NDF	TWA: 10 ppm	NDF	TWA: 10 ppm	TWA: 10 ppm

Chemical Name	Quebec OEL	Saskatchewan OEL	Yukon OEL
Chloroform 0.1 - 1%	TWA: 5 ppm TWA: 24.4 mg/m <sup>3</sup>	NDF	TWA: 10 ppm TWA: 50 mg/m <sup>3</sup>

**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** 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.  
Wear safety glasses with side shields (or goggles).

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

**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

Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

#### Information on basic physical and chemical properties

**Physical state** Liquid

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

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**Appearance** aqueous solution

**Color** colorless  
or  
clear

**Odor** Odorless

**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>	5.8	
<b>Melting point/freezing point</b>	0 °C / 32 °F	
<b>Boiling point / boiling range</b>	100 °C / 212 °F	
<b>Evaporation rate</b>	1 (water = 1) Estimation based on theoretical calculation	
<b>Vapor pressure</b>	24.002 mm Hg / 3.2 kPa at 25 °C / 77 °F	
<b>Vapor density (air = 1)</b>	0.62	
<b>Specific gravity (water = 1 / air = 1)</b>	0.98	
<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>	1 cP (mPa s) at 20 °C / 68 °F	
<b>Kinematic viscosity</b>	1.02 cSt (mm <sup>2</sup> /s) at 20 °C / 68 °F	

**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**

<b>Metal Corrosivity</b>	Not classified as corrosive to metal according to GHS criteria
<b>Steel Corrosion Rate</b>	No data available
<b>Aluminum Corrosion Rate</b>	No data available
<b>Volatile Organic Compounds (VOC) Content</b>	See ingredients information below.

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**Bulk density**

Not applicable

**Explosive properties**

Not classified according to GHS criteria.

**Explosion data**

No data available

**Upper explosion limit**

No data available

**Lower explosion limit**

No data available

**Flammable properties**

Material is not classified as flammable according to GHS criteria.  
Substance does not burn.

**Flammability Limit in Air**

**Upper flammability limit:**

No data available

**Lower flammability limit:**

No data available

**Flash point**

No data available

**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

None known based on information supplied.

### Explosive properties

Not classified according to GHS criteria.

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**Upper explosion limit** No data available

**Lower explosion limit** No data available

**Autoignition temperature**

No data available

**Sensitivity to Static Discharge**

None reported

**Sensitivity to Mechanical Impact**

None reported

## 11. TOXICOLOGICAL INFORMATION

**NIOSH (RTECS) Number** None reported

**Information on Likely Routes of Exposure**

<b>Product Information</b>	Product does not present an acute toxicity hazard based on known or supplied information.
<b>Inhalation</b>	No known effect based on information supplied.
<b>Eye contact</b>	No known effect based on information supplied.
<b>Skin contact</b>	No known effect based on information supplied.
<b>Ingestion</b>	No known effect based on information supplied.
<b>Aggravated Medical Conditions</b>	None known.
<b>Toxicologically synergistic products</b>	None known.
<b>Toxicokinetics, metabolism and distribution</b>	See ingredients information below.

<b>Chemical Name</b>	<b>Toxicokinetics, metabolism and distribution</b>
Chloroform (0.1 - 1%) CAS#: 67-66-3	A specific liver enzyme converts chloroform into toxic metabolites resulting in hepatotoxicity.

**Product Acute Toxicity Data**

**Oral Exposure Route** No data available

**Dermal Exposure Route** No data available

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

**Inhalation (Vapor) Exposure Route** No data available

**Inhalation (Gas) Exposure Route** No data available

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

<b>ATEmix (inhalation-dust/mist)</b>	167.00 mg/L
<b>ATEmix (inhalation-vapor)</b>	1,000.00 mg/L

**Ingredient Acute Toxicity Data**

**Oral Exposure Route**

If available, see data below

<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>
Potassium nitrate (0.1 - 1%)	Rat LD <sub>50</sub>	3015 mg/kg	None reported	None reported	IUCLID (The International Uniform Chemical Information)



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CAS#: 7757-79-1					Database)
Chemical Name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Chloroform (0.1 - 1%) CAS#: 67-66-3	Rat LD <sub>50</sub>	300 - 695 mg/kg	None reported	None reported	RTECS (Registry of Toxic Effects of Chemical Substances)
Chemical Name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Potassium nitrate (0.1 - 1%) CAS#: 7757-79-1	Rat TD <sub>Lo</sub>	10 mg/kg	None reported	<b>Blood</b> Methemoglobinemia-Carboxyhe moglobin	RTECS (Registry of Toxic Effects of Chemical Substances)
Chloroform (0.1 - 1%) CAS#: 67-66-3	Man LD <sub>Lo</sub>	2514 mg/kg	None reported	<b>Kidney, Ureter, or Bladder</b> Changes in tubules (including acute renal failure, acute tubular necrosis)	RTECS (Registry of Toxic Effects of Chemical Substances)

**Dermal Exposure Route**

If available, see data below

Chemical Name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Chloroform (0.1 - 1%) CAS#: 67-66-3	Rabbit LD <sub>50</sub>	> 20000 mg/kg	None reported	None reported	RTECS (Registry of Toxic Effects of Chemical Substances)

**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
Chloroform (0.1 - 1%) CAS#: 67-66-3	Rat LC <sub>50</sub>	4.7702 mg/L	4 hours	None reported	RTECS (Registry of Toxic Effects of Chemical Substances)

**Inhalation (Vapor) Exposure Route**

If available, see data below

Chemical Name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Chloroform (0.1 - 1%) CAS#: 67-66-3	Human TC <sub>Lo</sub>	171 mg/L	4 hours	<b>Behavioral</b> Hallucinations, Distorted perceptions	RTECS (Registry of Toxic Effects of Chemical Substances)

**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
Chloroform (0.1 - 1%) CAS#: 67-66-3	Open Irritation Test	Rabbit	10 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

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Chemical Name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Chloroform (0.1 - 1%) CAS#: 67-66-3	Standard Draize Test	Rabbit	20 mg	24 hours	Eye irritant	RTECS (Registry of Toxic Effects of Chemical Substances)

#### Sensitization Information

##### Product Sensitization Data

**Skin Sensitization Exposure Route** No data available.

**Respiratory Sensitization Exposure Route** No data available.

##### Ingredient Sensitization Data

**Skin Sensitization Exposure Route** No data available.

**Respiratory Sensitization Exposure Route** No data available.

#### Chronic Toxicity Information

##### Product Repeat Dose Toxicity Data

**Oral Exposure Route** No data available.

**Dermal Exposure Route** No data available.

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

**Inhalation (Vapor) Exposure Route** No data available.

**Inhalation (Gas) Exposure Route** No data available.

##### Ingredient Repeat Dose Toxicity Data

##### Oral Exposure Route

If available, see data below

Chemical Name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Potassium nitrate (0.1 - 1%) CAS#: 7757-79-1	Mouse TD <sub>Lo</sub>	36000 mg/kg	90 days	<b>Kidney, Ureter, or Bladder</b> Evidence of thyroid hypofunction, Changes in thyroid weight	RTECS (Registry of Toxic Effects of Chemical Substances)
Chloroform (0.1 - 1%) CAS#: 67-66-3	Rat TD <sub>Lo</sub>	540 mg/kg	3 days	<b>Biochemical</b> Intermediary metabolism (other proteins) <b>Kidney, Ureter, or Bladder</b> Changes in tubules (including acute renal failure, acute tubular necrosis)	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
Potassium nitrate (0.1 - 1%) CAS#: 7757-79-1	Rat TD <sub>Lo</sub>	2250 mg/kg	150 days	<b>Endocrine</b> Goiter, Thyroid hypofunction and weight loss	RTECS (Registry of Toxic Effects of Chemical Substances)

**Dermal Exposure Route** No data available

##### Inhalation (Dust/Mist) Exposure Route

If available, see data below

Chemical Name	Endpoint	Reported	Exposure	Toxicological effects	Key literature references and
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	type	dose	time		sources for data
Chloroform (0.1 - 1%) CAS#: 67-66-3	Rat TC <sub>Lo</sub>	90 mg/L	90 days	<b>Kidney, Ureter, or Bladder</b> Changes in tubules (including acute renal failure, acute tubular necrosis) <b>Liver</b> Hepatitis (hepatocellular necrosis), diffuse <b>Nutritional and Gross Metabolic</b> Weight loss or decreased weight gain	RTECS (Registry of Toxic Effects of Chemical Substances)

**Inhalation (Vapor) Exposure Route**

If available, see data below

Chemical Name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Chloroform (0.1 - 1%) CAS#: 67-66-3	Human TC <sub>Lo</sub>	0.010 mg/L	365 days	<b>Gastrointestinal</b> Nausea or vomiting Other changes	RTECS (Registry of Toxic Effects of Chemical Substances)

**Inhalation (Gas) Exposure Route**

No data available

Chemical Name	CAS No	ACGIH	IARC	NTP	OSHA
Potassium nitrate	7757-79-1	-	Group 2A	-	X
Chloroform	67-66-3	A3	Group 2B	Reasonably Anticipated	X

**Legend**

<b>ACGIH (American Conference of Governmental Industrial Hygienists)</b>	A3 - Animal Carcinogen
<b>IARC (International Agency for Research on Cancer)</b>	Group 2A - Probably Carcinogenic to Humans Group 2B - Possibly Carcinogenic to Humans
<b>NTP (National Toxicology Program)</b>	Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen
<b>OSHA (Occupational Safety and Health Administration of the US Department of Labor)</b>	X - Present

**Product Carcinogenicity Data**

No data available

**Oral Exposure Route**

No data available

**Dermal Exposure Route**

No data available

**Inhalation (Dust/Mist) Exposure Route**

No data available

**Inhalation (Vapor) Exposure Route**

No data available

**Inhalation (Gas) Exposure Route**

No data available

**Ingredient Carcinogenicity Data**

**Oral Exposure Route**

No data available

**Dermal Exposure Route**

No data available

**Inhalation (Dust/Mist) Exposure Route**

No data available

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**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

Chemical Name	Test	Cell Strain	Reported dose	Exposure time	Results	Key literature references and sources for data
Potassium nitrate (0.1 - 1%) CAS#: 7757-79-1	Gene conversion and mitotic recombination	Escherichia coli	5 mg/L	None reported	Positive test result for mutagenicity	RTECS (Registry of Toxic Effects of Chemical Substances)

**Oral Exposure Route**

No data available

**Dermal Exposure Route**

No data available

**Inhalation (Dust/Mist) Exposure Route**

No data available

**Inhalation (Vapor) Exposure Route**

No data available

**Inhalation (Gas) Exposure Route**

No data available

**Ingredient Germ Cell Mutagenicity *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
Potassium nitrate (0.1 - 1%) CAS#: 7757-79-1	Rat TD <sub>Lo</sub>	598 mg/kg	21 days	Effects on Newborn Behavioral	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

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Potassium nitrate (0.1 - 1%) CAS#: 7757-79-1	Rabbit	6505 mg/kg	4 days	<b>Effects on Fertility</b> Stillbirth	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** 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**

If available, see ingredient data below

Chemical Name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Potassium nitrate (0.1 - 1%) CAS#: 7757-79-1	96 hours	<i>Gambusia affinis</i>	LC <sub>50</sub>	22.5 mg/L	Vendor SDS
Chloroform (0.1 - 1%) CAS#: 67-66-3	96 hours	<i>Oncorhynchus mykiss</i>	LC <sub>50</sub>	18 mg/L	IUCLID (The International Uniform Chemical Information Database)
Chemical Name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Potassium nitrate (0.1 - 1%) CAS#: 7757-79-1	96 hours	<i>Poecilia reticulata</i>	LC <sub>50</sub>	1378 mg/L	IUCLID (The International Uniform Chemical Information Database)
Chloroform (0.1 - 1%) CAS#: 67-66-3	96 hours	<i>Lepomis macrochirus</i>	LC <sub>50</sub>	18 mg/L	IUCLID (The International Uniform Chemical Information Database)

##### **Crustacea**

If available, see ingredient data below

Chemical Name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
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Potassium nitrate (0.1 - 1%) CAS#: 7757-79-1	48 Hours	<i>Daphnia magna</i>	EC <sub>50</sub>	490 mg/L	Vendor SDS
Chloroform (0.1 - 1%) CAS#: 67-66-3	48 Hours	<i>Daphnia magna</i>	EC <sub>50</sub>	29 mg/L	IUCLID (The International Uniform Chemical Information Database)
<b>Chemical Name</b>	<b>Exposure time</b>	<b>Species</b>	<b>Endpoint type</b>	<b>Reported dose</b>	<b>Key literature references and sources for data</b>
Potassium nitrate (0.1 - 1%) CAS#: 7757-79-1	72 hours	<i>Daphnia magna</i>	EC <sub>50</sub>	226 mg/L	EPA (United States Environmental Protection Agency)

#### **Algae**

If available, see ingredient data below

<b>Chemical Name</b>	<b>Exposure time</b>	<b>Species</b>	<b>Endpoint type</b>	<b>Reported dose</b>	<b>Key literature references and sources for data</b>
Chloroform (0.1 - 1%) CAS#: 67-66-3	48 hours	<i>Desmodesmus subspicatus</i>	EC <sub>50</sub>	560 mg/L	IUCLID (The International Uniform Chemical Information Database)

#### **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**

<b>Chemical Name</b>	<b>Category</b>	<b>Persistent</b>	<b>Bioaccumulation</b>	<b>Inherently Toxic to Aquatic Organisms</b>
Chloroform (0.1 - 1%) CAS#: 67-66-3	Organics	Yes	No	Yes

#### **Persistence and degradability**

None known.

#### **Product Biodegradability Data**

If available, see ingredient data below.

#### **Ingredient Biodegradability Data**

Test data reported below

#### **Bioaccumulation**

If available, see ingredient data below.

**Product Bioaccumulation Data**

No data available.

**Ingredient Bioaccumulation Data**

No data available

**Additional information**

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#### Product Information

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

Not applicable

#### Ingredient Information

Chemical Name	Partition Coefficient (n-octanol/water)	Method
Chloroform (0.1 - 1%) CAS#: 67-66-3	$\log K_{ow} = 1.97$	No information available

#### Mobility

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

#### Product Information

**Soil Organic Carbon-Water Partition Coefficient**

Not applicable

#### Ingredient Information

Chemical Name	Soil Organic Carbon-Water Partition Coefficient	Method
Chloroform (0.1 - 1%) CAS#: 67-66-3	$\log K_{oc} = 1.71$	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

Chemical Name	Water solubility classification	Water solubility	Water solubility temperature °C	Water solubility temperature °F
Potassium nitrate CAS#: 7757-79-1	Soluble	> 1000 mg/L	25 °C	77 °F
Chloroform CAS#: 67-66-3	Soluble	7450 mg/L	25 °C	77 °F

#### Other adverse effects

Contains a substance with an endocrine-disrupting potential.

### 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

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container as normal trash. In the US, rinsate from empty containers is classified as hazardous waste and should be disposed of at an E.P.A. approved facility. Rinsate from empty containers may contain sufficient product to require disposal as hazardous waste in countries other than the US. Improper disposal or reuse of this container may be dangerous and illegal. Disposal should be in accordance with applicable regional, national, and local laws and regulations.

**US EPA Waste Number**

U044 D022

Chemical Name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Chloroform 67-66-3	U044	Included in waste streams: F024, F025, F039, K009, K010, K019, K020, K021, K029, K073, K116, K149, K150, K151, K158	6.0 mg/L regulatory level	U044

Chemical Name	RCRA - Halogenated Organic Compounds	RCRA - P Series Wastes	RCRA - F Series Wastes	RCRA - K Series Wastes
Chloroform 67-66-3	Category I - Volatiles	-	Toxic waste waste number F025 Waste description: Condensed light ends, spent filters and filter aids, and spent desiccant wastes from the production of certain chlorinated aliphatic hydrocarbons, by free radical catalyzed processes. These chlorinated aliphatic hydrocarbons are those having carbon chain lengths ranging from one to and including five, with varying amounts and positions of chlorine substitution.	Toxic waste waste number K021 Waste description: Aqueous spent antimony catalyst waste from fluoromethanes production.

**Special instructions for disposal** Dispose of material in an E.P.A. approved hazardous waste facility.

#### 14. TRANSPORT INFORMATION

**U.S. DOT** Not regulated

**TDG** Not regulated

**IATA** Not regulated

**IMDG** Not regulated

**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**



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**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 contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	SARA 313 - Threshold Values %
Potassium nitrate (CAS #: 7757-79-1)	1.0
Chloroform (CAS #: 67-66-3)	0.1

**SARA 311/312 Hazard Categories**

Acute health hazard	No
Chronic Health Hazard	Yes
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

**CWA (Clean Water Act)**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Chloroform 67-66-3	10 lb	X	X	X

**CERCLA**

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

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Chloroform	10 lb 1 lb	10 lb	RQ 10 lb final RQ

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67-66-3			RQ 4.54 kg final RQ RQ 1 lb final RQ RQ 0.454 kg final RQ
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**U.S. - Department of Homeland Security - Chemical Facility Anti-Terrorism Standards (CFATS) - Security Issues**

Chemical Name	U.S. - Department of Homeland Security - Chemical Facility Anti-Terrorism Standards (CFATS) - Security Issues
Potassium nitrate (0.1 - 1%) CAS#: 7757-79-1	Theft - Explosives/Improvised Explosive Device Precursors
Chloroform (0.1 - 1%) CAS#: 67-66-3	Release - Toxic

**US State Regulations**

**California Proposition 65**

This product contains the following Proposition 65 chemicals

Chemical Name	California Proposition 65
Chloroform (CAS #: 67-66-3)	Carcinogen Developmental

**U.S. State Right-to-Know Regulations**

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Potassium nitrate 7757-79-1	X	X	X
Chloroform 67-66-3	X	X	X

**U.S. EPA Label Information**

**EPA Pesticide Registration Number** Not applicable

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

**Special Comments**

None

**Additional information**

**Global Automotive Declarable Substance List (GADSL)**

Not applicable

**NFPA and HMIS Classifications**

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

Immediately Dangerous to Life or Health  
ACGIH (American Conference of Governmental Industrial Hygienists)

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*NDF*

*no data*

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

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

**Prepared By** Hach Product Compliance Department

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**Revision Note** None

**Disclaimer**

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

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

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**End of Safety Data Sheet**