SAFETY DATA SHEET

1. IDENTIFICATION

Product identifier
Product Name pPb-2 Fixer Solution

Other means of identification
Product Code(s) 2368655

Safety data sheet number M00616

UN/ID no UN1760

Recommended use of the chemical and restrictions on use
Recommended Use Determination of lead.
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 +1(970) 669-3050

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

2. HAZARDS IDENTIFICATION

Classification

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

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 1
Reproductive toxicity	Category 1B
Specific target organ toxicity (single exposure)	Category 3

Hazards not otherwise classified (HNOC)
Not applicable

Label elements

Signal word - Danger

Hazard statements

H315 - Causes skin irritation
H318 - Causes serious eye damage
H335 - May cause respiratory irritation
H360 - May damage fertility or the unborn child

Precautionary statements
P280 - Wear protective gloves/protective clothing/eye protection/face protection
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
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
P201 - Obtain special instructions before use
P308 + P313 - IF exposed or concerned: Get medical advice/attention
P405 - Store locked up
P501 - Dispose of contents/ container to an approved waste disposal plant
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray
P271 - Use only outdoors or in a well-ventilated area
P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing
P403 + P233 - Store in a well-ventilated place. Keep container tightly closed

Other Hazards Known
May be harmful if swallowed

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 #
1,3-Propanediol, 2-amino-2-(hydroxymethyl)-	77-86-1	20 - 30%	-
Potassium nitrate	7757-79-1	3 - 7%	-
Succinic acid	110-15-6	3 - 7%	-
1-Imidazole	288-32-4	1 - 5%	-
(+)-Tartaric acid	87-69-4	1 - 5%	-

4. FIRST AID MEASURES

Description of first aid measures

General advice Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.

Inhalation Remove to fresh air. Get medical attention immediately if symptoms occur. IF exposed or concerned: Get medical advice/attention.

Eye contact Get immediate medical advice/attention. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area.

Skin contact Wash off immediately with soap and plenty of water for at least 15 minutes. Get medical attention if irritation develops and persists.

Ingestion Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Call a physician.

Self-protection of the first aider Avoid contact with skin, eyes or clothing.

Most important symptoms and effects, both acute and delayed

Symptoms Burning sensation.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. FIRE-FIGHTING MEASURES

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

Unsuitable Extinguishing Media Caution: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the chemical No information available.

Hazardous combustion products This material will not burn.

Special protective equipment for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout 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.

Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. Ensure adequate ventilation. Evacuate personnel to safe areas.

Other Information Refer to protective measures listed in Sections 7 and 8.

Environmental precautions

Environmental precautions Prevent further leakage or spillage if safe to do so.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Pick up and transfer to properly labeled containers.

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

Reference to other sections See section 8 for more information. See section 13 for more information.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Remove contaminated clothing and shoes. Take off contaminated clothing and wash before reuse. Ensure adequate ventilation. Avoid breathing vapors or mists. In case of insufficient ventilation, wear suitable respiratory equipment.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children.

Flammability class Not applicable

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

Appropriate engineering controls

Engineering Controls Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Hand Protection Wear suitable gloves. Impervious gloves.

Eye/face protection Tight sealing safety goggles.

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

General Hygiene Considerations Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Wash hands before breaks and

immediately after handling the product.

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

Thermal hazards None under normal processing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Liquid		
Appearance	aqueous solution	**Color**	yellow
Odor	None	**Odor threshold**	No data available

Property	Values	Remarks • Method
Molecular weight	No data available	
pH	8.1	
Melting point/freezing point	-12 °C / 10 °F	
Boiling point / boiling range	99 °C / 210 °F	
Evaporation rate	0.59 (water = 1)	
Vapor pressure	24.002 mm Hg / 3.2 kPa at 25 °C / 77 °F	Estimation based on theoretical calculation
Vapor density (air = 1)	0.62 (air = 1)	
Specific gravity (water = 1 / air = 1)	1.165	
Partition Coefficient (n-octanol/water)	Not applicable	
Soil Organic Carbon-Water Partition Coefficient	Not applicable	
Autoignition temperature	No data available	
Decomposition temperature	No data available	
Dynamic viscosity	No data available	
Kinematic viscosity	No data available	

Solubility(ies)

Water solubility

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

Solubility in other solvents

Chemical Name	Solubility classification	Solubility	Solubility Temperature
None reported	Soluble	> 1000 mg/L	25 °C / 77 °F

Other Information

Metal Corrosivity

Steel Corrosion Rate	No data available
Aluminum Corrosion Rate	0.51 mm/yr / 0.02 in/yr

Volatile Organic Compounds (VOC) Content

Chemical name	CAS No.	Volatile organic compounds (VOC) content	CAA (Clean Air Act)
1,3-Propanediol, 2-amino-2-(hydroxymethyl)-	77-86-1	No data available	-
Potassium nitrate	7757-79-1	No data available	-
Succinic acid	110-15-6	No data available	X
1-Imidazole	288-32-4	No data available	-
(+)-Tartaric acid	87-69-4	No data available	-

Explosive properties

Upper explosion limit	No data available
Lower explosion limit	No data available

Flammable properties

Flash point	No data available

Flammability Limit in Air

Upper flammability limit:	No data available
Lower flammability limit:	No data available

Oxidizing properties	No data available.
Bulk density	Not applicable
Particle Size	No information available
Particle Size Distribution	No information available

10. STABILITY AND REACTIVITY

Reactivity
Not applicable.

Chemical stability
Stability Stable under normal conditions.

Explosion data
Sensitivity to Mechanical Impact None
Sensitivity to Static Discharge None.

Possibility of Hazardous Reactions
Possibility of Hazardous Reactions None under normal processing.

Hazardous polymerization
None under normal processing.

Conditions to avoid
Conditions to avoid None known based on information supplied.

Incompatible materials

Incompatible materials Strong acids. Strong bases. Strong oxidizing agents.

Hazardous Decomposition Products

Carbon monoxide. Carbon dioxide. Nitrogen oxides. Potassium oxide.

11. TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Product Information

Inhalation May cause irritation of respiratory tract.

Eye contact Severely irritating to eyes. Causes serious eye damage. May cause burns. May cause irreversible damage to eyes.

Skin contact Causes skin irritation.

Ingestion Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Symptoms Redness. Burning. May cause blindness. May cause redness and tearing of the eyes.

Aggravated Medical Conditions Skin disorders. Eye disorders. Respiratory disorders.

Toxicologically synergistic products None known.

Toxicokinetics, metabolism and distribution No information available.

Product Acute Toxicity Data

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

Unknown Acute Toxicity

0% of the mixture consists of ingredient(s) of unknown toxicity.

Acute Toxicity Estimations (ATE)

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

ATEmix (oral)	4,060.00 mg/kg
ATEmix (dermal)	No information available
ATEmix (inhalation-dust/mist)	No information available
ATEmix (inhalation-vapor)	No information available
ATEmix (inhalation-gas)	No information available

Ingredient Acute Toxicity Data

Oral Exposure Route If available, see data below

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
1,3-Propanediol, 2-amino-2-(hydroxymethyl) - (20 - 30%) CAS#: 77-86-1	Rat LD_{50}	5900 mg/kg	None reported	None reported	Vendor SDS

Potassium nitrate (3 - 7%) CAS#: 7757-79-1	Rat LD_{50}	3015 mg/kg	None reported	None reported	IUCLID (The International Uniform Chemical Information Database)
Succinic acid (3 - 7%) CAS#: 110-15-6	Rat LD_{50}	2260 mg/kg	None reported	None reported	Vendor SDS
1-Imidazole (1 - 5%) CAS#: 288-32-4	Rat LD_{50}	220 mg/kg	None reported	None reported	IUCLID (The International Uniform Chemical Information Database)

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
1-Imidazole (1 - 5%) CAS#: 288-32-4	Mouse LD_{50}	880 mg/kg	None reported	None reported	No information available

Dermal Exposure Route If available, see data below
Inhalation (Dust/Mist) Exposure Route If available, see data below
Inhalation (Vapor) Exposure Route If available, see data below
Inhalation (Gas) Exposure Route If available, see data below

Product Specific Target Organ Toxicity Single Exposure Data

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

Ingredient Specific Target Organ Toxicity Single Exposure Data

Oral Exposure Route If available, see data below

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Potassium nitrate (3 - 7%) CAS#: 7757-79-1	Rat TD_{Lo}	10 mg/kg	None reported	**Blood** Methemoglobinemia-Carboxyhemoglobin	RTECS (Registry of Toxic Effects of Chemical Substances)

Dermal Exposure Route If available, see data below
Inhalation (Dust/Mist) Exposure Route If available, see data below
Inhalation (Vapor) Exposure Route If available, see data below
Inhalation (Gas) Exposure Route If available, see data below

Aspiration toxicity
No data available

Product Skin Corrosion/Irritation Data
No data available.

Ingredient Skin Corrosion/Irritation Data
If available, see data below

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
1,3-Propanediol, 2-amino-2-(hydroxymethyl)- (20 - 30%) CAS#: 77-86-1	Standard Draize Test	Rabbit	500 mg	4 hours	Not corrosive or irritating to skin	ECHA (The European Chemicals Agency)
1-Imidazole (1 - 5%)	Organization for Economic	Rabbit	800 mg	1 hours	**Data Source** Corrosive to skin	ECHA (The European Chemicals Agency)

CAS#: 288-32-4	Co-operation and Development (OECD) - Test 404: Acute Dermal Corrosion/Irritation					
(+)-Tartaric acid (1 - 5%) CAS#: 87-69-4	Existing human experience	Human	None reported	None reported	Skin irritant	Vendor SDS

Product Serious Eye Damage/Eye Irritation Data
No data available.

Ingredient Eye Damage/Eye Irritation Data
If available, see data below

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
1,3-Propanediol, 2-amino-2-(hydroxymethyl)- (20 - 30%) CAS#: 77-86-1	Standard Draize Test	Rabbit	100 mg	None reported	Mild eye irritant	ECHA (The European Chemicals Agency)
Succinic acid (3 - 7%) CAS#: 110-15-6	Standard Draize Test	Rabbit	0.750 mg	None reported	Corrosive to eyes	ECHA (The European Chemicals Agency)
1-Imidazole (1 - 5%) CAS#: 288-32-4	Standard Draize Test	Rabbit	100 mg	None reported	Corrosive to eyes	ECHA (The European Chemicals Agency)
(+)-Tartaric acid (1 - 5%) CAS#: 87-69-4	Existing human experience	Human	None reported	None reported	Corrosive to eyes	Vendor SDS

Sensitization Information

Product Sensitization Data
Skin Sensitization Exposure Route No data available.
Respiratory Sensitization Exposure Route No data available.

Ingredient Sensitization Data
Skin Sensitization Exposure Route If available, see data below.

Chemical name	Test method	Species	Results	Key literature references and sources for data
(+)-Tartaric acid (1 - 5%) CAS#: 87-69-4	None reported	Guinea pig	Not confirmed to be a skin sensitizer	Vendor SDS

Respiratory Sensitization Exposure Route If available, see data below.

Chronic Toxicity Information

Product Specific Target Organ Toxicity Repeat Dose Data
Oral Exposure Route No data available.
Dermal Exposure Route No data available.
Inhalation (Dust/Mist) Exposure Route No data available.
Inhalation (Vapor) Exposure Route No data available.
Inhalation (Gas) Exposure Route No data available.

Ingredient Specific Target Organ Toxicity Repeat Exposure Data
Oral Exposure Route If available, see data below

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data

Potassium nitrate (3 - 7%) CAS#: 7757-79-1	Mouse TD_{Lo}	36000 mg/kg	90 days	**Kidney, Ureter, or Bladder** Evidence of thyroid hypofunction, Changes in thyroid weight	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 (3 - 7%) CAS#: 7757-79-1	Rat TD_{Lo}	2250 mg/kg	150 days	**Endocrine** Goiter, Thyroid hypofunction and weight loss	RTECS (Registry of Toxic Effects of Chemical Substances)

Dermal Exposure Route If available, see data below
Inhalation (Dust/Mist) Exposure Route If available, see data below
Inhalation (Vapor) Exposure Route If available, see data below
Inhalation (Gas) Exposure Route If available, see data below

Product Carcinogenicity Data

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

Ingredient Carcinogenicity Data

Chemical name	CAS No.	ACGIH	IARC	NTP	OSHA
1,3-Propanediol, 2-amino-2-(hydroxymethyl) -	77-86-1	-	-	-	-
Potassium nitrate	7757-79-1	-	Group 2A	-	X
Succinic acid	110-15-6	-	-	-	-
1-Imidazole	288-32-4	-	-	-	-
(+)-Tartaric acid	87-69-4	-	-	-	-

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)	Does not apply
IARC (International Agency for Research on Cancer)	Group 2A - Probably Carcinogenic to Humans
NTP (National Toxicology Program)	Does not apply
OSHA (Occupational Safety and Health Administration of the US Department of Labor)	X - Present

Oral Exposure Route If available, see data below
Dermal Exposure Route If available, see data below
Inhalation (Dust/Mist) Exposure Route If available, see data below
Inhalation (Vapor) Exposure Route If available, see data below
Inhalation (Gas) Exposure Route If available, see data below

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 (3 - 7%) 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)
Succinic acid (3 - 7%)	DNA inhibition	Human fibroblast	None reported	None reported	Positive test result for mutagenicity	RTECS (Registry of Toxic Effects of

CAS#: 110-15-6						Chemical Substances)
(+)-Tartaric acid (1 - 5%) CAS#: 87-69-4	Mutation in microorganisms	*Salmonella typhimurium*	None reported	None reported	Negative test result for mutagenicity	Vendor SDS

Product 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

Ingredient Germ Cell Mutagenicity *invivo* **Data**

Oral Exposure Route	If available, see data below
Dermal Exposure Route	If available, see data below
Inhalation (Dust/Mist) Exposure Route	If available, see data below
Inhalation (Vapor) Exposure Route	If available, see data below
Inhalation (Gas) Exposure Route	If available, see data below

Product Reproductive Toxicity Data

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

Ingredient Reproductive Toxicity Data

Oral Exposure Route If available, see data below

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Potassium nitrate (3 - 7%) CAS#: 7757-79-1	Rat TD_{Lo}	598 mg/kg	21 days	**Effects on Newborn Reproductive 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**
Potassium nitrate (3 - 7%) CAS#: 7757-79-1	Rabbit	6505 mg/kg	4 days	**Effects on Fertility** Abortion	RTECS (Registry of Toxic Effects of Chemical Substances)

Inhalation (Dust/Mist) Exposure Route	If available, see data below
Inhalation (Vapor) Exposure Route	If available, see data below
Inhalation (Gas) Exposure Route	If available, see data below

12. ECOLOGICAL INFORMATION

Ecotoxicity

Product Ecological Data

Aquatic toxicity

Fish	No data available
Crustacea	No data available
Algae	No data available

Ingredient Ecological Data

Aquatic toxicity

Fish If available, see ingredient data below

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
1,3-Propanediol, 2-amino-2-(hydroxymethyl)- (20 - 30%) CAS#: 77-86-1	96 hours	None reported	LC_{50}	5083 mg/L	Estimation through ECOSARS v1.11 part of the Estimation Programs Interface (EPI) Suite™
Potassium nitrate (3 - 7%) CAS#: 7757-79-1	96 hours	*Gambusia affinis*	LC_{50}	22.5 mg/L	Vendor SDS
Succinic acid (3 - 7%) CAS#: 110-15-6	96 hours	None reported	LC_{50}	2060000 mg/L	Estimation through ECOSARS v1.11 part of the Estimation Programs Interface (EPI) Suite™
1-Imidazole (1 - 5%) CAS#: 288-32-4	96 hours	*Leuciscus idus*	LC_{50}	284 mg/L	IUCLID (The International Uniform Chemical Information Database)
(+)-Tartaric acid (1 - 5%) CAS#: 87-69-4	96 hours	None reported	LC_{50}	150 mg/L	Vendor SDS

Crustacea If available, see ingredient data below

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
1,3-Propanediol, 2-amino-2-(hydroxymethyl)- (20 - 30%) CAS#: 77-86-1	48 Hours	None reported	EC_{50}	400 mg/L	Estimation through ECOSARS v1.11 part of the Estimation Programs Interface (EPI) Suite™
Potassium nitrate (3 - 7%) CAS#: 7757-79-1	48 Hours	*Daphnia magna*	EC_{50}	490 mg/L	Vendor SDS
Succinic acid (3 - 7%) CAS#: 110-15-6	48 Hours	None reported	EC_{50}	918830 mg/L	Estimation through ECOSARS v1.11 part of the Estimation Programs Interface (EPI) Suite™
1-Imidazole (1 - 5%) CAS#: 288-32-4	48 Hours	*Daphnia magna*	EC_{50}	250 mg/L	IUCLID (The International Uniform Chemical Information Database)
(+)-Tartaric acid (1 - 5%) CAS#: 87-69-4	48 Hours	*Ceriodaphnia dubia*	EC_{50}	87.26, 46.04 - 165.37 mg/L	ERMA (New Zealands Environmental Risk Management Authority)

Algae If available, see ingredient data below

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
1,3-Propanediol, 2-amino-2-(hydroxymethyl)- (20 - 30%) CAS#: 77-86-1	96 hours	None reported	EC_{50}	750 mg/L	Estimation through ECOSARS v1.11 part of the Estimation Programs Interface (EPI) Suite™
Succinic acid (3 - 7%) CAS#: 110-15-6	96 hours	None reported	EC_{50}	254630 mg/L	Estimation through ECOSARS v1.11 part of the Estimation Programs Interface (EPI) Suite™

Other Information

Persistence and degradability

Product Biodegradability Data
No data available.

Ingredient Biodegradability Data

Chemical name	Test method	Biodegradation	Exposure time	Results
Potassium nitrate (3 - 7%) CAS#: 7757-79-1	None reported	None reported	None reported	Readily biodegradable

Bioaccumulation

Product Bioaccumulation Data
No data available.

Partition Coefficient (n-octanol/water) Not applicable

Ingredient Bioaccumulation Data

Mobility

Soil Organic Carbon-Water Partition Coefficient Not applicable

Water solubility

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

Other adverse effects
Contains a substance with an endocrine-disrupting potential.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

US EPA Waste Number D002

Special instructions for disposal Open cold water tap completely, slowly pour the material to the drain. Allow cold water to run for 5 minutes to completely flush the system.

14. TRANSPORT INFORMATION

U.S. DOT

UN/ID no UN1760
Proper shipping name Corrosive Liquid, N.O.S.
DOT Technical Name (5% Imidazole solution)
Hazard Class 8
Packing Group III

TDG

UN/ID no UN1760
Proper shipping name Corrosive Liquid, N.O.S.
TDG Technical Name (5% Imidazole solution)

Hazard Class	8
Packing Group	III

IATA

UN/ID no	UN1760
Proper shipping name	Corrosive Liquid, N.O.S.
IATA Technical Name	(5% Imidazole solution)
Hazard Class	8
Packing Group	III

IMDG

UN/ID no	UN1760
Proper shipping name	Corrosive Liquid, N.O.S.
IMDG Technical Name	(5% Imidazole solution)
Hazard Class	8
Packing Group	III

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 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

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

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

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 (3 - 7%) CAS#: 7757-79-1	Theft - Explosives/Improvised Explosive Device Precursors

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
Potassium nitrate 7757-79-1	X	X	X

U.S. EPA Label Information

Chemical name	FIFRA	FDA
Succinic acid	-	21 CFR 184.1091
(+)-Tartaric acid	-	21 CFR 184.1099

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** - 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	*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		

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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.

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End of Safety Data Sheet