

Product Name: SorbX®-100

# Safety Data Sheet

SorbX®-100

## SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** SorbX®-100

**Synonyms:** Rare Earth Chloride

**CAS Number:** Proprietary

**Product Use:** Aqueous phosphorous reduction media for waste water treatment

### Manufacturer/Supplier Identification:

Molycorp Minerals, LLC

HC-1 Box 224

67750 Bailey Road

Mountain Pass, California 92366

United States of America

**Telephone:** (760) 856-2201

**Facsimile:** (760) 856-2253

**Email:** [info@molycorp.com](mailto:info@molycorp.com)

### PRODUCT INFORMATION

Safety Data Sheet Requests: +1 (760) 856-7616 (7:30am - 3:30pm, Pacific Time, Mon-Fri)

### EMERGENCY INFORMATION

#### Transportation Emergency Response:

CHEMTREC: +1 (800) 424-9300 (within the US) or +1 (703) 527-3887 (outside the US)

#### Health Emergency:

American Association of Poison Control Center (800) 222-1222 (within the US)

## SECTION 2 HAZARD IDENTIFICATION

### Global Harmonized System (GHS) Classification:

Health	Environmental	Physical
Acute Oral Toxicity – Category 5	Acute Toxicity – None*	None
Eye Irritation – Category 2B		
Skin Irritation – Category 3		
Target Organ Toxicity (Repeated) – Category 2		

\*Note: This material is not expected to be harmful to fish or aquatic invertebrates. Inhibits algae growth by chelating free phosphate.

**Label Pictogram:**



**Signal Word:** Warning

**Product Name:** SorbX®-100

Hazard Statements	Precautionary Statements
H303: May be harmful if swallowed	P264: Wash hands thoroughly after handling
H316: Causes skin irritation	P280: Wear protective gloves/protective clothing/eye protection/face protection
H320: Causes eye irritation	P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes, remove contact lenses, if present and easy to do. Continue rinsing
H373: May cause damage to organs (liver and spleen) through prolonged repeated exposure	P302+P352: IF ON SKIN: Wash with plenty of soap and water
	P312: Call a POISON CENTER/doctor/physician if you feel unwell
	P332+P313: If skin irritation occurs: Get medical advice/attention
	P337+P313: If eye irritation persists: Get medical advice/attention
	P402/P404: Store in a dry place. Store in a closed container.
	P501: Place contaminated materials in disposal containers and dispose of in a manner consistent with applicable regulations

**EU Classification:** According to European Union Directive 67/548/EEC, this substance is not classified in the Annex I.

**Pictogram EC:**  
(67/548/EEC;  
1999/45/EC)



**Risk Phrases:** R36/38: Irritating to eyes and skin  
R48: Danger of serious damage to health by prolonged exposure

**Safety Phrases:** S24/S25: Avoid contact with skin and eyes  
S36/37/39: Wear suitable protective clothing, gloves and eye/face protection

### SECTION 3 COMPOSITION/ INFORMATION ON INGREDIENTS

CAS NUMBER	EC NUMBER (EINECS/ ELINCS)	CHEMICAL NAME	PERCENT (% Weight)
7732-18-5	215-185-5	Water	65-69
Proprietary	Proprietary	Rare Earth Chloride	31-35

#### SECTION 4 FIRST AID MEASURES

- Eye:** Eye irritation. Flush immediately with large amounts of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Seek immediate medical attention if irritation persists.
- Skin:** Remove contaminated clothing and wash affected area(s) with soap and water. If irritation of the skin persists seek immediate medical attention.
- Inhalation:** No specific first aid measures are required. If exposed to excessive levels of material in the air, move the exposed person to fresh air. Get medical attention if coughing or respiratory discomfort occurs.
- Ingestion:** No specific first aid measures are required. If swallowed do NOT induce vomiting. As a precaution, get medical advice.

#### SECTION 5 FIRE FIGHTING MEASURES

- Flash Point:** Not applicable      **Flammable Limits:** Not applicable
- Suitable extinguishing media:** If this material is involved in a fire, use water fog, foam, dry chemical or carbon dioxide to extinguish flames.
- Unusual fire and explosion data/Specific hazards:** None known.
- Special protective actions for firefighters:** None known. This material will not burn.

#### SECTION 6 ACCIDENTAL RELEASE MEASURES

- Personal precautions:** Prevent contact with skin or eyes.
- Environmental precautions:** Stop the source of the release if you can do it without risk. Contain release to prevent further contamination of soil, surface water or groundwater. Stop the source of the release if you can do it without risk. Contain release to prevent further contamination of soil, surface water or groundwater.
- Containing environmental effects:** Where feasible and appropriate, remove contaminated soil. Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations.
- Measures when handling spilled substance:** Clean up spill as soon as possible, observing precautions in **Section 8**. Use appropriate techniques such as applying non-combustible absorbent materials or pumping.

**Product Name:** SorbX®-100

## SECTION 7 HANDLING AND STORAGE

**Precautions for safe handling:** Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. Avoid contaminating soil or releasing this material into sewage and drainage systems and bodies of water other than those being treated.

**Conditions for safe storage:** Store in a closed container. Store in a cool, well-ventilated area.

## SECTION 8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

Note: This material is a liquid that is not expected to form dust or volatiles.

### Appropriate engineering controls

**Work/Hygienic practices:** Consider the potential hazards of this material, applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended.

**Ventilation:** Use in a well-ventilated area.

**Other equipment:** The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

**Environmental protection:** Take measures to prevent material from being released to soil, water, or air. Where feasible and appropriate, remove contaminated soil if released to ground. Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations.

### Individual protection measures - Personal protective equipment (PPE)

**Eye/Face Protection:** The use of a face shield and/or chemical goggles to safe guard against potential eye contact, irritation, or injury is recommended.

**Hands/Skin Protection:** The use of gloves impermeable to the specific material handled is advised to prevent skin contact, possible irritation, absorption, and skin damage (i.e. Nitrile gloves) – see glove manufacturer literature for permeability information. Depending on use conditions, apron, arm covers, or other impervious clothing may be necessary.

**Respiratory Protection:** None required where adequate ventilation conditions exist.

**Thermal Hazards:** None known.

**Product Name:** SorbX®-100

## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Attention: the data below are typical values and do not constitute a specification.

<b>Appearance</b> Physical state: Color: Odor/Odor threshold:	Liquid White to Amber Mild	Specific gravity (Water = 1):	1.4-1.6 (solution) @ 20°C
pH:	3.0-4.0	Partition Coefficient: n-octanol/water	Not applicable
Freezing point:	-40°C (-40°F)	Water solubility:	High
Boiling point/range:	Not available	Autoignition Temperature:	Not applicable
Flash point:	Not applicable	Decomposition Temperature:	Not applicable
Evaporation rate:	Not available	Viscosity:	Not applicable
Flammability:	Non-flammable	Other Properties	
Upper/lower flammability limits	Non-flammable	Oxidizing properties:	Not applicable
Vapor pressure:	Not applicable	Molecular Weight	Proprietary
Vapor density (Air = 1):	Not applicable	Bulk density:	Not available

## SECTION 10 STABILITY AND REACTIVITY

**Reactivity:** This material is considered stable under normal storage and handling conditions

**Chemical stability:** This material is considered stable under normal storage and handling conditions

**Possibility of hazardous reactions:** See below

**Incompatibility:** Incompatible with oxidizing reagents, can generate hazardous chlorine gas

**Hazardous decomposition products:** See above

## SECTION 11 TOXICOLOGICAL INFORMATION

**Likely routes of exposure:** Eye and skin contact

**Signs and symptoms of overexposure:** Eye and skin irritation

### Acute Effects

**Acute oral toxicity:** Slightly toxic by this route (Category 5) – see below

**Acute inhalation toxicity:** Not likely route of exposure - No information found

**Acute dermal toxicity:** No information found

**Skin irritation:** Can cause skin irritation

**Eye irritation:** Can cause eye irritation

**Skin sensitization:** No information found

### Other Health Effects

**Specific target organ toxicity (repeated exposure):** Chronic oral exposure to rare earth chlorides may cause toxic effects to the liver and spleen based on experimental animal data

**Product Name:** SorbX®-100

**Mutagenicity:** Rare earth chlorides were negative in the Ames bacterial mutagenic test using bacterial strains TA135, TA1537, TA98, TA100, TA102, and WP2uvrA.

**Carcinogenicity:** Not assessed by IARC, NTP or USEPA for carcinogenicity

**Medical conditions aggravated by exposure:** Preexisting diseases of the liver or spleen

**Acute toxicity values:** Oral LD50 (Rat) = 2800 mg/kg

**Additional Information:** None - Proprietary information.

## SECTION 12 ECOLOGICAL INFORMATION

**Ecotoxicity:** 96 –hour LC50 (Fathead Minnow) > 1000 mg/L  
48-hour LC50 (Daphnia) > 1000 mg/L  
IC25 (Green Algae) = 211 mg/L

**Persistence and biodegradability:** This inert mineral product is not expected to be readily biodegradable.

**Bioaccumulation:** No data available

**Mobility in soil:** No data available

**Other ecological data:** No data available

## SECTION 13 DISPOSAL CONSIDERATIONS

**Disposal methods:** Use material for its intended purpose or recycle if possible. This material, if it must be discarded, may meet the criteria of a hazardous waste as defined by US EPA under RCRA (40 CFR 261) or other State and local regulations. Measurement of certain physical properties and analysis for regulated components may be necessary to make a correct determination. If this material is classified as a hazardous waste federal law requires disposal at a licensed hazardous waste disposal facility. Chemical additions, processing or otherwise altering this material may make waste management information presented in the MSDS incomplete.

**Container:** Place contaminated materials in disposal containers and dispose of in a manner consistent with applicable regulations.

## SECTION 14 TRANSPORT INFORMATION

Agency:	Shipping Description:
DOT	NOT REGULATED AS A HAZARDOUS MATERIAL FOR TRANSPORTATION UNDER DOT 49 CFR
IMO/IMDG	NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORT UNDER THE IMDG CODE
ICAO/IATA	NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORT UNDER ICAO

**Product Name:** SorbX®-100

**UN/NA number:** Not classified  
**Proper shipping name:** Not classified  
**Hazard class:** Not classified  
**Packing group:** Not classified  
**Environmental hazards:** Not classified

## SECTION 15 REGULATORY INFORMATION

**Chemical safety report:** None available

### United States Federal Regulations:

#### **Comprehensive Environmental Response and Liability Act of 1980 (CERCLA):**

This material is not listed under CERCLA and has no reportable quantity

**Clean Water Act (CWA):** Not listed

**Clean Air Act (CAA):** Not listed

#### **Superfund Amendments and Reauthorization Act (SARA) Title III Information:**

**SARA 302 Components:** No chemicals listed are subject to reporting requirements of S.302

**SARA 313 Components:** No chemicals listed exceed threshold reporting levels

**SARA 311/312 Hazards:** Acute Health Hazard, Chronic Health Hazard

**Toxic Substances Control Act:** This material is not listed on the TSCA inventory

### State and Other:

**California:** This material is not listed under Proposition 65 (CA Health & Safety Code Section 25249.5).

**Massachusetts:** Not listed

**New Jersey:** Not listed

**IARC:** Not listed

**NTP:** Not listed

### **REGULATORY LISTS SEARCHED:**

01-1=IARC Group 1	03=EPCRA 313
01-2A=IARC Group 2A	04=CA Proposition 65
01-2B=IARC Group 2B	05=MA RTK
02=NTP Carcinogen	06=NJ RTK

### Classification according to European Union Regulation (EC) No. 1272/2008

This substance is not classified in the Annex I of Directive 67/548/EEC.

**Pictogram GHS:** GHS08  
(1272/2008/EC)



**Signal word:** Warning

**Hazard statement:** H303: May be harmful if swallowed  
H316: Causes skin irritation  
H320: Causes eye irritation  
H373: May cause damage to organs (liver and spleen) through prolonged repeated exposure

**Product Name:** SorbX®-100

## Precautionary statements

**Prevention:** P264: Wash hands 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

**Response:** P302+P352: IF ON SKIN: Wash with plenty of soap and water  
P312: Call a POISON CENTER/doctor/physician if you feel unwell  
P332+P313: If skin irritation occurs: Get medical advice/attention  
P337+P313: If eye irritation persists: Get medical advice/attention

**Pictogram EC:**  
(67/548/EEC;  
1999/45/EC)



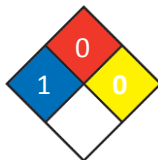
**Risk Phrases:** R36/38: Irritating to eyes and skin  
R48: Danger of serious damage to health by prolonged exposure

**Safety Phrases:** S24/S25: Avoid contact with skin and eyes  
S36/37/39: Wear suitable protective clothing, gloves and eye/face protection

## SECTION 16 OTHER INFORMATION

**National Fire Protection Association (NFPA) Ratings:** This information is provided solely for the use of individuals trained in the NFPA system.

**Health: 1**  
**Flammability: 0**  
**Reactivity: 0**



## Acronyms and abbreviations that may have been used in this document:

ACGIH: American Conference of Government Industrial Hygienists	LV: Limit Values
ADR: Accord Dangereux Routier	MAC: Maximum Acceptable/Admissible Concentration
ADNR: Regulation for the carriage of dangerous substances on the Rhine	MAK: Maximale Arbeitsplatzkonzentration
AICS: Australian Inventory of Chemical Substances	NRC: Nuclear Regulatory Commission
ÁK: Average Concentration	NTP: National Toxicology Program (US)
CAS: Chemical Abstract Service Number	OEL: Occupational Exposure Limit
CAA: Clean Air Act	ONU: United Nations number
CMP: Concentración Máxima Permissible	OSHA: Occupational Safety and Health Administration
CWA: Clean Water Act	PPE: Personal Protective Equipment
EC: European Community	RID: International rule for transport of dangerous substances by Rail
EEC: European Economic Community	SARA: Superfund Amendment and Reauthorization Act
EINECS: European Inventory of Existing Chemical Substances	SDS: Safety Data Sheet
ELINCS: European List of Notified Chemical Substances	T: Toxic



**Product Name:** SorbX® -100

ENCS: Existing and New Chemical Substances (Japan)	TGG-8hr: Tijd Gewogen Gemiddelde-8 hour
EPCRA: Emergency Planning and Community Right To Know Act	TWA: Time Weighted Average
GHS: Global Harmonizing System	TWA-8hr: Time Weighted Average-8 hour
IARC: International Agency for Research on Cancer	USEPA: United States Environmental Protection Agency
IATA: International Air Transport Association	VLA-ED: Valor límite ambiental de exposición diaria
IC25: Inhibiting Concentration 25%	VLE: Valeur Limite d'Exposition
ICAO: International Civil Aviation Organization (UN)	VLEP: Valeurs Limites d'Exposition Professionnelle
IMO: International Maritime Organization	VME: Valeur Limite de Moyenne d'Exposition Professionnelle
IMDG: International Maritime Dangerous Goods	WGK: Wassergefährdungsklasse (Water Hazard Classes)
IPRV: Ilgalaikio poveikio ribine verte	Xn: Warning
LC50: Lethal Concentration 50%	
LD50: Lethal Dose 50%	
LLV: Level Limit Values	

**Revision Indicator:** This is a new Safety Data Sheet.

**Creation Date:** November 1, 2013

**The above information is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.**