

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 02/04/2014 Version: 1.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Substance

Substance name : Potassium Permanganate

CAS No : 7722-64-7
Product code : LC19850
Formula : KMnO4

Synonyms : permanganate of potash / potassium salt permanganic acid

BIG no : 10297

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Oxidant

Bleaching agent Reagent Disinfectant Deodorizer Algicide

Dyestuff/pigment: component

Medicine

Laboratory chemical Food industry: additive

Insecticide Germicide

1.3. Details of the supplier of the safety data sheet

LabChem Inc

Jackson's Pointe Commerce Park Building 1000, 1010 Jackson's Pointe Court

Zelienople, PA 16063 - USA T 412-826-5230 - F 724-473-0647 info@labchem.com - www.labchem.com

1.4. Emergency telephone number

Emergency number : CHEMTREC: 1-800-424-9300 or 011-703-527-3887

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Ox. Sol. 2 H272 Acute Tox. 4 (Oral) H302 Aquatic Acute 1 H400 Aquatic Chronic 1 H410

2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US)



(!)



GHS03

GHS07

GHS09

Signal word (GHS-US) : Danger

Hazard statements (GHS-US) : H272 - May intensify fire; oxidiser

H302 - Harmful if swallowed

H410 - Very toxic to aquatic life with long lasting effects

Precautionary statements (GHS-US) : P210 - Keep away from heat, sparks, open flames, hot surfaces. - No smoking

P220 - Keep/Store away from clothing, combustible materials P221 - Take any precaution to avoid mixing with combustibles P264 - Wash exposed skin thoroughly after handling

P264 - Wash exposed skin thoroughly after handling P270 - Do not eat, drink or smoke when using this product

P273 - Avoid release to the environment

02/04/2014 EN (English) Page 1

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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

P301+P312 - IF SWALLOWED: call a POISON CENTER or doctor/physician if you feel unwell

P330 - If swallowed, rinse mouth

P391 - Collect spillage

P501 - Dispose of contents/container to comply with local, state and federal regulations

2.3. Other hazards

Other hazards not contributing to the classification

: None under normal conditions.

2.4. Unknown acute toxicity (GHS-US)

No data available

SECTION 3: Composition/information on ingredients

3.1. Substance

Substance type : Mono-constituent

Name	Product identifier	%	GHS-US classification
Potassium Permanganate (Main constituent)	(CAS No) 7722-64-7	100	Ox. Sol. 2, H272 Acute Tox. 4 (Oral), H302 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Full text of H-phrases: see section 16

3.2. Mixture

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general

: Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital.

First-aid measures after inhalation

First-aid measures after skin contact

: Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.

Wash immediately with lots of water (15 minutes)/shower. Do not apply (chemical) neutralizing agents. Remove clothing while washing. Do not remove clothing if it sticks to the skin. Cover wounds with sterile bandage. Consult a doctor/medical service. If burned surface > 10%: take victim to hospital.

First-aid measures after eye contact

Rinse immediately with plenty of water for 15 minutes. Do not apply neutralizing agents. Take victim to an ophthalmologist.

First-aid measures after ingestion

Rinse mouth with water. Immediately after ingestion: give lots of water to drink. Do not induce vomiting. Immediately consult a doctor/medical service. Call Poison Information Centre (www.big.be/antigif.htm). Take the container/vomit to the doctor/hospital. Ingestion of large quantities: immediately to hospital.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation

: AFTER INHALATION OF DUST: Dry/sore throat. Coughing. Irritation of the respiratory tract. Irritation of the nasal mucous membranes. EXPOSURE TO HIGH CONCENTRATIONS: Respiratory difficulties. FOLLOWING SYMPTOMS MAY APPEAR LATER: Risk of lung oedema.

Symptoms/injuries after skin contact

: Tingling/irritation of the skin. May stain the skin. ON CONTINUOUS EXPOSURE/CONTACT: Caustic burns/corrosion of the skin.

Symptoms/injuries after eye contact

Corrosion of the eye tissue. Inflammation/damage of the eye tissue. ON CONTINUOUS EXPOSURE/CONTACT: Permanent eye damage.

Symptoms/injuries after ingestion

: Nausea. Vomiting. Diarrhoea. Irritation of the gastric/intestinal mucosa. AFTER ABSORPTION OF HIGH QUANTITIES: Possible esophageal perforation. Shock. Slowing heart action. Low arterial pressure. Possible laryngeal spasm/oedema. Respiratory difficulties.

Chronic symptoms

ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Respiratory difficulties. Impairment of the nervous system. Movement disturbances. Coordination disorders. Myasthenia. Tremor. Paralysis. Cramps/uncontrolled muscular contractions. Impaired memory. Emotional instability.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

02/04/2014 EN (English) 2/9

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : EXTINGUISHING MEDIA FOR SURROUNDING FIRES: All extinguishing media allowed.

Preferably: quantities of water.

Unsuitable extinguishing media : No unsuitable extinguishing media known.

5.2. Special hazards arising from the substance or mixture

Fire hazard : DIRECT FIRE HAZARD. Non combustible. INDIRECT FIRE HAZARD. Promotes combustion.

Reactions involving a fire hazard: see "Reactivity Hazard".

Explosion hazard : INDIRECT EXPLOSION HAZARD. Reactions with explosion hazards: see "Reactivity Hazard".

Reactivity : Decomposes on exposure to temperature rise: oxidation which increases fire hazard. Reacts

with combustible materials: risk of spontaneous ignition. Violent to explosive reaction with (some) acids: release of toxic and corrosive gases/vapours. Reacts violently with many compounds e.g.: with organic material and with (strong) reducers. With (some) metals. With (increased) risk of

fire/explosion.

5.3. Advice for firefighters

Precautionary measures fire : Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation.

Firefighting instructions : Cool tanks/drums with water spray/remove them into safety. Do not move the load if exposed to

heat. Take account of environmentally hazardous firefighting water. Use water moderately and if

possible collect or contain it.

Protection during firefighting : Heat/fire exposure: compressed air/oxygen apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment : Gloves. Face-shield. Protective clothing. Dust cloud production: compressed air/oxygen

apparatus. Dust cloud production: dust-tight suit. Reactivity hazard: compressed air/oxygen

apparatus. Reactivity hazard: gas-tight suit.

Emergency procedures : Mark the danger area. Prevent dust cloud formation. No naked flames. Keep containers closed.

Wash contaminated clothes. In case of hazardous reactions: keep upwind. In case of reactivity

hazard: consider evacuation.

Measures in case of dust release : In case of dust production: keep upwind. Dust production: have neighbourhood close doors and

windows.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection. Do not breathe dust.

Emergency procedures : If a major spill occurs, all personnel should be immediately evacuated and the area ventilated.

Stop release. Ventilate area.

6.2. Environmental precautions

Prevent soil and water pollution. Prevent spreading in sewers.

6.3. Methods and material for containment and cleaning up

For containment : Contain released substance, pump into suitable containers. Consult "Material-handling" to select

material of containers. Plug the leak, cut off the supply. Dam up the solid spill. Knock down/dilute dust cloud with water spray. If reacting: dilute toxic gas/vapour with water spray. Take account of

toxic/corrosive precipitation water.

Methods for cleaning up : Stop dust cloud by covering with sand/earth. Scoop solid spill into closing containers. Carefully

collect the spill/leftovers. Spill must not return in its original container. See "Material-handling" for suitable container materials. Clean contaminated surfaces with an excess of water. Wash

clothing and equipment after handling.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling

: Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Keep the substance free from contamination. Use corrosionproof equipment. Thoroughly clean/dry the installation before use. Do not discharge the waste into the drain. Avoid raising dust. Keep away from naked flames/heat. Observe very strict hygiene - avoid contact. Keep container tightly closed. Measure the concentration in the air regularly. Carry operations in the open/under local exhaust/ventilation or with respiratory protection.

02/04/2014 EN (English) 3/9

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

7.2. Conditions for safe storage, including any incompatibilities

Heat and ignition sources : KEEP SUBSTANCE AWAY FROM: heat sources.

Prohibitions on mixed storage : KEEP SUBSTANCE AWAY FROM: combustible materials. reducing agents. (strong) acids.

metal powders. cellulosic materials. organic materials. alcohols. peroxides.

Storage area : Store at ambient temperature. Keep out of direct sunlight. Store in a dry area. Fireproof

storeroom. Unauthorized persons are not admitted. Keep only in the original container. Store

only in a limited quantity. Meet the legal requirements.

Special rules on packaging : SPECIAL REQUIREMENTS: closing. clean. correctly labelled. meet the legal requirements.

Secure fragile packagings in solid containers.

Packaging materials : SUITABLE MATERIAL: steel. aluminium. glass. stoneware/porcelain. MATERIAL TO AVOID:

wood. cellusosic material.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Potassium Permanganate (7722-64-7)		
USA ACGIH	ACGIH TWA (mg/m³)	0.1 mg/m³
USA OSHA	OSHA PEL (Ceiling) (mg/m³)	5 mg/m³ as Mn

8.2. Exposure controls

Appropriate engineering controls : Emergency eye wash fountains and safety showers should be available in the immediate vicinity

of any potential exposure. Ensure adequate ventilation.

Materials for protective clothing : GIVE EXCELLENT RESISTANCE: polyethylene. GIVE GOOD RESISTANCE: butyl rubber.

PVC. polyethylene/ethylenevinylalcohol.

Hand protection : Gloves.

Eye protection : Face shield. In case of dust production: protective goggles.

Skin and body protection : Protective clothing. In case of dust production: head/neck protection. In case of dust production:

dustproof clothing.

Respiratory protection : Dust production: dust mask with filter type P3. High dust production: self-contained breathing

apparatus.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Solid

Appearance : Crystalline solid. Crystalline powder.

Molecular mass : 158.03 g/mol
Colour : Dark violet-brown.
Odour : Odourless.
Odour threshold : No data available
pH : 7.0 - 8.5 (1.6 %)

pH solution : 1.6 %

Relative evaporation rate (butylacetate=1) : No data available

Melting point : > 240 °C

Freezing point : No data available
Boiling point : Not applicable
Flash point : Not applicable
Self ignition temperature : Not applicable
Decomposition temperature : > 240 °C

Flammability (solid, gas) : No data available
Vapour pressure : < 0.10 hPa
Relative vapour density at 20 °C : No data available

Relative density : 2.7

Density : 2700 kg/m³

02/04/2014 EN (English) 4/9

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

,	2,
Solubility	 Moderately soluble in water. Substance sinks in water. Soluble in ethanol. Soluble in methanol. Soluble in acetone. Soluble in acetic acid. Soluble in sulfuric acid. Soluble in pyridine. Water: 6.4 g/100ml
Log Pow	: -1.73 (Estimated value)
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: May intensify fire; oxidiser.
Explosive limits	: No data available

9.2. Other information

Minimum ignition energy : Not applicable SADT : Not applicable VOC content : Not applicable

Other properties : Opaque. Substance has basic reaction.

SECTION 10: Stability and reactivity

10.1. Reactivity

Decomposes on exposure to temperature rise: oxidation which increases fire hazard. Reacts with combustible materials: risk of spontaneous ignition. Violent to explosive reaction with (some) acids: release of toxic and corrosive gases/vapours. Reacts violently with many compounds e.g.: with organic material and with (strong) reducers. With (some) metals. With (increased) risk of fire/explosion.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Reacts exothermically with combustible materials: (increased) risk of fire.

10.4. Conditions to avoid

Incompatible materials.

10.5. Incompatible materials

Strong reducing agents. Organic compounds. combustible materials. metals.

10.6. Hazardous decomposition products

manganese.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Harmful if swallowed.

Potassium Permanganate (\f)7722-64-7		
LD50 oral rat	1090 mg/kg (Rat)	
Skin corrosion/irritation	: Not classified	
	pH: 7.0 - 8.5 (1.6 %)	
Serious eye damage/irritation	: Not classified	
	pH: 7.0 - 8.5 (1.6 %)	
Respiratory or skin sensitisation	: Not classified	
Germ cell mutagenicity	: Not classified	
Carcinogenicity	: Not classified	
Reproductive toxicity	: Not classified	
Specific target organ toxicity (single exposure)	: Not classified	
Specific target organ toxicity (repeated exposure)	: Not classified	
. ,	. Net aleasified	
Aspiration hazard	: Not classified	

02/04/2014 EN (English) 5/9

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Symptoms/injuries after inhalation	: AFTER INHALATION OF DUST: Dry/sore throat. Coughing. Irritation of the respiratory tract. Irritation of the nasal mucous membranes. EXPOSURE TO HIGH CONCENTRATIONS: Respiratory difficulties. FOLLOWING SYMPTOMS MAY APPEAR LATER: Risk of lung oedema.
Symptoms/injuries after skin contact	 Tingling/irritation of the skin. May stain the skin. ON CONTINUOUS EXPOSURE/CONTACT: Caustic burns/corrosion of the skin.
Symptoms/injuries after eye contact	: Corrosion of the eye tissue. Inflammation/damage of the eye tissue. ON CONTINUOUS EXPOSURE/CONTACT: Permanent eye damage.
Symptoms/injuries after ingestion	: Nausea. Vomiting. Diarrhoea. Irritation of the gastric/intestinal mucosa. AFTER ABSORPTION OF HIGH QUANTITIES: Possible esophageal perforation. Shock. Slowing heart action. Low arterial pressure. Possible laryngeal spasm/oedema. Respiratory difficulties.
Chronic symptoms	: ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Respiratory difficulties. Impairment of the nervous system. Movement disturbances. Coordination disorders. Myasthenia. Tremor. Paralysis. Cramps/uncontrolled muscular contractions. Impaired memory. Emotional instability.
Likely routes of exposure	: Skin and eye contact;Inhalation

SECTION 12: Ecological information

424	Tovioity	

Ecology - general : Dangerous for the environment.

Ecology - air : TA-Luft Klasse 5.2.2/III.

Ecology - water : Severe water pollutant (surface water). Ground water pollutant. Toxic to fishes. Very toxic to invertebrates (Daphnia).

Potassium Permanganate (7722-64-7)		
LC50 fishes 1	0.261 mg/l (96 h; lctalurus punctatus)	
EC50 Daphnia 1	0.235 mg/l (24 h; Daphnia magna)	
LC50 fish 2	1.22 mg/l 96 h; Salmo gairdneri (Oncorhynchus mykiss)	
EC50 Daphnia 2	0.5 mg/l (96 h; Crustacea)	
TLM fish 1	5.4 ppm (48 h; Lepomis macrochirus)	
Threshold limit other aquatic organisms 1	> 0.64 mg/l (Plankton)	
Threshold limit algae 1	10 mg/l (4 h; Chlorella sp.)	

12.2. Persistence and degradability

Potassium Permanganate (7722-64-7)		
Persistence and degradability	Biodegradability: not applicable.	
Biochemical oxygen demand (BOD)	Not applicable	
Chemical oxygen demand (COD)	Not applicable	
ThOD	Not applicable	
BOD (% of ThOD)	Not applicable	

12.3. Bioaccumulative potential

Potassium Permanganate (7722-64-7)	
Log Pow	-1.73 (Estimated value)
Bioaccumulative potential	Bioaccumulation: not applicable.

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations

: Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Recycle/reuse. Immobilize the toxic or harmful components. Remove to an authorized dump (Class I).

authorized dump (Class I).

Additional information : LWCA (the Netherlands): KGA category 06. Hazardous waste according to Directive

2008/98/EC.

02/04/2014 EN (English) 6/9

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 14: Transport information

In accordance with DOT

Transport document description : UN1490 Potassium permanganate, 5.1, II

UN-No.(DOT) : 1490 DOT NA no. : UN1490

DOT Proper Shipping Name : Potassium permanganate

Department of Transportation (DOT) Hazard

Classes

: 5.1 - Class 5.1 - Oxidizer 49 CFR 173.128

Hazard labels (DOT) : 5.1 - Oxidiser



Packing group (DOT) : II - Medium Danger

DOT Special Provisions (49 CFR 172.102)

: IB8 - Authorized IBCs: Metal (11A, 11B, 11N, 21A, 21B, 21N, 31A, 31B and 31N); Rigid plastics (11H1, 11H2, 21H1, 21H2, 31H1 and 31H2); Composite (11HZ1, 11HZ2, 21HZ1, 21HZ2, 31HZ1 and 31HZ2); Fiberboard (11G); Wooden (11C, 11D and 11F); Flexible (13H1, 13H2, 13H3, 13H4, 13H5, 13L1, 13L2, 13L3, 13L4, 13M1 or 13M2).

IP2 - When IBCs other than metal or rigid plastics IBCs are used, they must be offered for transportation in a closed freight container or a closed transport vehicle.

IP4 - Flexible, fiberboard or wooden IBCs must be sift-proof and water-resistant or be fitted with a sift-proof and water-resistant liner.

T3 - 2.65 178.274(d)(2) Normal..... 178.275(d)(2)

TP33 - The portable tank instruction assigned for this substance applies for granular and powdered solids and for solids which are filled and discharged at temperatures above their melting point which are cooled and transported as a solid mass. Solid substances transported or offered for transport above their melting point are authorized for transportation in portable tanks conforming to the provisions of portable tank instruction T4 for solid substances of packing group II or T7 for solid substances of packing group II, unless a tank with more stringent requirements for minimum shell thickness, maximum allowable working pressure, pressure-relief devices or bottom outlets are assigned in which case the more stringent tank instruction and special provisions shall apply. Filling limits must be in accordance with portable tank special provision TP3. Solids meeting the definition of an elevated temperature material must be transported in accordance with the applicable requirements of this subchapter.

DOT Packaging Exceptions (49 CFR 173.xxx) : 152
DOT Packaging Non Bulk (49 CFR 173.xxx) : 212
DOT Packaging Bulk (49 CFR 173.xxx) : 240
DOT Quantity Limitations Passenger aircraft/rail : 5 kg

(49 CFR 173.27)

DOT Quantity Limitations Cargo aircraft only (49 : 25 kg

CFR 175.75)

DOT Vessel Stowage Location

J

: D - The material must be stowed "on deck only" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers or one passenger per each 3 m of overall vessel length, but the material is prohibited on passenger

vessels in which the limiting number of passengers is exceeded.

DOT Vessel Stowage Other : 56 - Stow "separated from" ammonium compounds,58 - Stow "separated from" cyanides

Marine pollutant :



Additional information

Other information : No supplementary information available.

State during transport (ADR-RID) : as solid.

ADR

Transport document description : UN 1490 Potassium permanganate, 5.1, II, (E)

Packing group (ADR) : II

02/04/2014 EN (English) 7/9

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Class (ADR) : 5.1 - Oxidizing substances

Hazard identification number (Kemler No.) : 50
Classification code (ADR) : 02

Danger labels (ADR) : 5.1 - Oxidizing substances



Orange plates

50 1490

Tunnel restriction code : E

Transport by sea

UN-No. (IMDG) : 1490

Class (IMDG) : 5.1 - Oxidizing substances

EmS-No. (1) : F-H EmS-No. (2) : S-Q

Air transport

UN-No.(IATA) : 1490

Class (IATA) : 5 - Oxidizing substances
Packing group (IATA) : II - Medium Danger

SECTION 15: Regulatory information

15.1. US Federal regulations

Potassium Permanganate (7722-64-7)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Listed on SARA Section 313 (Specific toxic chemical listings)	
RQ (Reportable quantity, section 304 of EPA's 100 lb List of Lists) :	
SARA Section 311/312 Hazard Classes	Reactive hazard

15.2. International regulations

CANADA

Potassium Permanganate	(7722-64-7)
Listed on the Canadian DSL	_ (Domestic Sustances List) inventory.
WHMIS Classification	Class C - Oxidizing Material Class D Division 2 Subdivision B - Toxic material causing other toxic effects

EU-Regulations

No additional information available

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Ox. Sol. 2 H272 Acute Tox. 4 (Oral) H302 Aquatic Acute 1 H400 Aquatic Chronic 1 H410

Full text of H-phrases: see section 16

Classification according to Directive 67/548/EEC or 1999/45/EC

O; R8 Xn; R22 N; R50/53

02/04/2014 EN (English) 8/9

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Full text of R-phrases: see section 16

15.2.2. National regulations

Potassium Permanganate (7722-64-7)

Listed on the Canadian Ingredient Disclosure List

15.3. US State regulations

No additional information available

SECTION 16: Other information

Full text of H-phrases: see section 16:

ext of 11-prilases, see section 10.		
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4	
Aquatic Acute 1	Hazardous to the aquatic environment — AcuteHazard, Category 1	
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1	
Ox. Sol. 2	Oxidising Solids, Category 2	
H272	May intensify fire; oxidiser	
H302	Harmful if swallowed	
H400	Very toxic to aquatic life	
H410	Very toxic to aquatic life with long lasting effects	

NFPA health hazard : 1 - Exposure could cause irritation but only minor residual

injury even if no treatment is given.

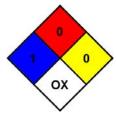
NFPA fire hazard : 0 - Materials that will not burn.

NFPA reactivity : 0 - Normally stable, even under fire exposure conditions,

and are not reactive with water.

NFPA specific hazard : OX - This denotes an oxidizer, a chemical which can

greatly increase the rate of combustion/fire.



HMIS III Rating

Health : 1 Slight Hazard - Irritation or minor reversible injury possible

Flammability : 0 Minimal Hazard
Physical : 0 Minimal Hazard

Personal Protection : F

SDS US (GHS HazCom 2012)

Information in this SDS is from available published sources and is believed to be accurate. No warranty, express or implied, is made and LabChem Inc assumes no liability resulting from the use of this SDS. The user must determine suitability of this information for his application.

02/04/2014 EN (English) 9/9