SAFETY DATA SHEET

1. IDENTIFICATION

Product Identifier

Product Name POTASSIUM PERMANGANATE SOLUTION
Chemical Name Potassium permanganate solution

Recommended use of the chemical and restrictions on use

Recommended use Iron sulfide scale mitigation
Restrictions on use For industrial use only

Supplier details

West Penetone Inc.
11411-160 Street
Edmonton, AB,
T5M3T7
Tel: 780-454-3919

Emergency Telephone Number

Canutec (613)-996-6666 or 1-888-226-8832 – FOR 24 HOUR TRANSPORT EMERGENCY WITHIN CANADA
Chemtrec 1-800-424-9300 – FOR 24 HOUR TRANSPORT EMERGENCY WITHIN USA

2. HAZARDS IDENTIFICATION

Classification

Hazardous to the aquatic environment, acute hazard	Category 2
Hazardous to the aquatic environment, long-term hazard	Category 2

Label Elements

WARNING

Hazard Statements
Toxic to aquatic life with long lasting effects

Precautionary Statements - Prevention
Avoid release to the environment.

Precautionary Statements - Response
Collect spillage.

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant according to local, provincial/federal regulations.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %
Potassium permanganate	7722-64-7	4

4. FIRST AID MEASURES

Ingestion Rinse mouth. Do not induce vomiting. If symptoms occur, get medical advice/attention.

Skin contact Wash with plenty of water. If skin irritation occurs, get medical advice/attention. Take off contaminated clothing and wash before reuse.

Inhalation Remove victim to fresh air and keep at rest in a position comfortable for breathing
If symptoms occur, get medical advice/attention.

Eye contact Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation occurs, get medical advice/attention.

Most important symptoms and effects, both acute and delayed

None reasonable foreseen.

Indication of any immediate medical attention and special treatment needed

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
None.

Specific hazards arising from the chemical
During fire, gases hazardous to health may be formed including oxides of potassium and manganese. Do not allow run-off from fire-fighting to enter drains or water courses.

Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. Use appropriate containment to avoid environmental contamination.

Environmental Precautions
Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains/surface waters/groundwater.

Methods and material for containment and cleaning up
Contain and solidify with inert absorbent material. Keep in suitable, closed containers for disposal. For large spills, stop flow of material, prevent product from entering drains, and pump off product where this is without risk and possible. Proceed as above.

7. HANDLING AND STORAGE

Precautions for Safe Handling

Handling Avoid contact with skin, eyes and clothing. When using, do not eat, drink, or smoke. Use recommended personal protective equipment.

Conditions for safe storage, including any incompatibilities

Storage Keep containers tightly closed away from direct sunlight in a dry, cool and well-ventilated place.

Incompatible Materials Strong reducing agents and bases.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

Chemical Name	ACGIH TWA	OSHA PEL	NIOSH IDLH
Potassium permanganate 7722-64-7	0.10 mg/m^3 inhalable fraction 0.02 mg/m^3 respirable fraction	5 mg/m^3 ceiling	STEL: 3 mg/m^3 fume TWA: 1 mg/m^3 fume IDLH: 500 mg/m^3

Appropriate engineering controls

Engineering Controls Ensure adequate ventilation, especially in confined areas. Eyewash and shower facilities must be made available when handling this product.

Individual protection measures, such as personal protective equipment

Eye/face Protection Safety glasses with side shields or goggles. Wear face shield where risk of splashing exists.

Skin and body protection Wear protective gloves and protective clothing.

Respiratory Protection Wear respiratory protection in case of vapor/aerosol release.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice. Routinely wash work clothing and protective equipment to remove contaminants.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE :
Purple liquid
ODOR :
Odorless
ODOR THRESHOLD :
Not applicable
pH :
Neutral
MELTING POINT / FREEZING POINT :
Approx. 0ºC (32ºF)
BOILING POINT/BOILING RANGE :
Approx. 100ºC (212ºF)
FLASH POINT :
None
EVAPORATION RATE, water = 1 :
1
FLAMMABILITY (SOLID, GAS):
Not applicable
VAPOR PRESSURE, mm Hg AT 20ºC (68°F) :
14
VAPOR DENSITY (Air = 1) :
0.7
RELATIVE DENSITY AT 20ºC (68°F) :
1.010-1.020
SOLUBILITY IN WATER :
Complete
PARTITION COEFFICIENT, N-OCTANOL/WATER :
Not applicable for inorganic substances
AUTO-IGNITION TEMPERATURE :
None
DECOMPOSITION TEMPERATURE :
Not available
VISCOSITY :
Not available
FLAMMABLE LIMITS :
UPPER : Not applicable **LOWER :** Not applicable

10. STABILITY AND REACTIVITY

Reactivity
Reactive.

Chemical Stability
Stable under normal conditions of storage and use.

Possibility of hazardous reactions
Contact with combustible materials may cause fire.

Conditions to Avoid
Extreme temperatures ≥ 135ºC (≥ 275ºF). Store away from incompatible materials.

Incompatible Materials
Strong reducing agents and bases, combustible materials.

Hazardous decomposition products
Under normal conditions of storage and use, hazardous decomposition products should not be produced. Material liberates chlorine in contact with hydrochloric acid. Thermal decompositions can lead to release of toxic metal fumes such as oxides of potassium and manganese.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
potassium permanganate 7722-64-7	525-1090 mg/kg (rat)	Not listed	Not listed

Information on likely sources of exposure

Serious eye damage/irritation May cause eye irritation.
Skin corrosion/irritation May cause skin irritation.
Ingestion Under the intended modes of use, expected to be a low ingestion hazard.
Inhalation Under the intended modes of use, expected to be a low inhalation hazard.

Delayed and immediate effects and also chronic effects from short and long-term exposure

Respiratory or skin sensitization Not a sensitizer.
Germ cell mutagenicity None known.
Carcinogenicity No listed carcinogens.
Reproductive toxicity No information available.
STOT - single exposure No information available.
STOT- repeated exposure No information available.
Aspiration Hazard None.

Symptoms related to the physical, chemical and toxicological characteristics
May cause irritation to skin, eyes, and mucous membranes.

12. ECOLOGICAL INFORMATION

Ecotoxicity
If available, ecotoxicity values of individual components are shown below.

Chemical Name	Fish	Waterflea	Algae
potassium permanganate 7722-64-7	0.261 mg/L: 96 h ictalurus punctatus LC50 1.22 mg/L: 96 h oncorhynchus mykiss	0.235 mg/L: 24 h daphnia magna EC50 0.5 mg/L: 96 h crustacean EC50	10 mg/L: 4 h chlorella sp.

Persistence and degradability
May persist.

Bioaccumulative potential
Does not significantly accumulate in organisms.

Mobility in soil
No information available

Other adverse effects
Do not release untreated into natural waters. No other adverse environmental effects are expected.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method Dispose of in accordance with local regulations.

Contaminated Packaging Empty containers should be taken for local recycling, recovery or waste disposal.

14. TRANSPORT INFORMATION

UN Number: 3082
UN Proper Shipping Name: Environmentally Hazardous Substance, Liquid, N.O.S. (potassium permanganate solution)
Transport Hazard Class(es)
Class: TDG: 9
US DOT: 9
IMDG: 9
Label(s): 9
Packing Group: III
Marine Pollutant: Yes

Special precautions for user: None established

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:
Not determined

15. REGULATORY INFORMATION

Canada (DSL/NDSL)
All ingredients contained in this product are in compliance with the Canadian Environmental Protection Act and are listed on the DSL or are exempt.

United States (TSCA)
All ingredients contained in this product are listed on the TSCA inventory or are exempt.

HMIS Information:
Health: 1
Flammability: 0
Reactivity: 0

16. OTHER INFORMATION

Preparation Date 22 April, 2016
Revision Date 1 May 2018
Revision Note Modifications to Section 1, 7, 14, 15

Disclaimer

The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of SDS