

## 1. IDENTIFICATION

### Product Identifier

**Product Name** IRON SULFIDE DISSOLVER OPP  
**Chemical Name** THPS/DETA-phosphonate 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

Main office – (780)-454-3919, 8:00 AM to 4:30 PM MST

## 2. HAZARDS IDENTIFICATION

### Classification

Acute toxicity, inhalation – vapors, mist	Category 4
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Skin sensitizer	Category 1
Hazardous to the aquatic environment, acute hazard	Category 1

### Label Elements

#### WARNING

#### **Hazard Statements**

Harmful if inhaled.  
 Causes skin irritation.  
 Causes serious eye irritation.  
 May cause an allergic skin reaction.  
 Very toxic to aquatic life.



### Precautionary Statements - Prevention

Avoid breathing mist/vapours/spray.  
 Wash face, hands and any exposed skin thoroughly after handling.  
 Use only outdoors or in a well-ventilated area.  
 Contaminated work clothing should not be allowed out of the workplace.  
 Avoid release to the environment.  
 Wear protective gloves/protective clothing/eye protection/face protection.

### Precautionary Statements - Response

IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse.  
 IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.  
 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.

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 %
Bis[tetrakis(hydroxymethyl)phosphonium] sulfate	55566-30-8	10-30
DETA-phosphonate	15822-60-8	3-7
ammonium chloride	12125-02-9	0.5-1.5

**4. FIRST AID MEASURES****Ingestion**

Do NOT induce vomiting. Drink 1 or 2 glasses of water. Call a physician or Poison Control Centre immediately. Never give anything by mouth to an unconscious person.

**Skin contact**

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

**Inhalation**

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

**Eye contact**

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.

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

Contact with eyes may cause serious irritation, discomfort or pain, excess blinking and tear production with marked excess redness and swelling of the conjunctiva, and possible corneal injury. Contact with skin may cause irritation with local redness. May cause an allergic skin reaction with prolonged or repeated exposure. Inhalation of mist/vapors/spray may cause respiratory tract irritation leading to a temporary burning sensation of the nose and throat, coughing, and difficulty breathing. Excessive exposure may aggravate preexisting asthma and other respiratory disorders. Ingestion may cause irritation or a burning sensation of the mouth and throat, nausea, vomiting, abdominal pain and damage to the gastrointestinal tract.

**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 carbon, phosphorous, and sulfur and other toxic or irritating compounds.

**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. Material supports combustion.

**6. ACCIDENTAL RELEASE MEASURES****Personal precautions, protective equipment and emergency procedures**

Avoid contact with skin, eyes and clothing. Use personal protective equipment. Keep unnecessary and unprotected personnel from entering the area.

**Environmental Precautions**

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. Avoid prolonged or repeated contact with skin. Avoid inhalation of mist/vapors/spray. Keep containers closed when not in use. Use recommended personal protective equipment.

**Conditions for safe storage, including any incompatibilities****Storage**

Keep containers tightly closed in a dry, cool and well-ventilated place away from incompatible materials.

**Incompatible Materials**

Strong oxidizing, reducing or alkaline materials.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION****Control parameters**

Only constituents with exposure limits are listed. Any constituent not listed has no known exposure limit.

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Bis[tetrakis(hydroxymethyl)phosphonium] sulfate 55566-30-8	TWA: 2 mg/m <sup>3</sup>	Not available	Not available
ammonium chloride 12125-02-9	TWA: 10 mg/m <sup>3</sup> – fume STEL: 20 mg/m <sup>3</sup> – fume	Not available	Not available

**Appropriate engineering controls****Engineering Controls**

Ensure adequate ventilation, especially in confined areas. Eyewash facilities and emergency shower 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 or face shield with high splashing risk.

**Skin and body protection**

Wear protective gloves and protective clothing.

**Respiratory Protection**

Respiratory protection if ventilation is inadequate or in case of vapor/mist/aerosol release.

**General Hygiene Considerations**

Handle in accordance with good industrial hygiene and safety practice. Wash soiled clothing immediately.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**APPEARANCE :**

Clear, yellow liquid

**ODOR :**

Acidic

**ODOR THRESHOLD :**

Not applicable

**pH :**

3.0-5.0

**MELTING POINT / FREEZING POINT :**

Not available

**BOILING POINT/BOILING RANGE :**

Not available

**FLASH POINT :**

None

**EVAPORATION RATE, water = 1 :**

1

**FLAMMABILITY (SOLID, GAS) :**

Not applicable

**VAPOR PRESSURE, mm Hg AT 25°C (68°F) :**

Not available

**VAPOR DENSITY (Air = 1) :**

Not available

**RELATIVE DENSITY AT 20°C (68°F) :**

1.100

**SOLUBILITY IN WATER :**

Complete

**PARTITION COEFFICIENT, N-OCTANOL/WATER :**

Not available

**AUTO-IGNITION TEMPERATURE :**

Not available

**DECOMPOSITION TEMPERATURE :**

≥ 160°C (≥320°F)

**VISCOSITY :**

Not available

**FLAMMABLE LIMITS :****UPPER :** Not applicable **LOWER :** Not applicable

## 10. STABILITY AND REACTIVITY

**Reactivity**

Not reactive under normal conditions.

**Conditions to Avoid**

Store away from incompatible materials. Temperatures above 130°C (266°F). High pH.

**Chemical Stability**

Stable under normal conditions.

**Possibility of hazardous reactions**

Under normal conditions of storage and use, hazardous reactions will not occur.

**Incompatible Materials**

Strong oxidizing, reducing or alkaline materials.

**Hazardous decomposition products**

Oxides of carbon, phosphorous, and sulfur.

## 11. TOXICOLOGICAL INFORMATION

**Acute toxicity****ATE<sub>mix</sub>** – LD50 oral – approx. ≥2053 mg/kg (rat), LD50 dermal – approx. ≥6637 mg/kg (rat), LC50 inhalation-vapors – ≥17.99 mg/L – 4 h (rat)

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Bis[tetrakis(hydroxymethyl)phosphonium] sulfate 55566-30-8	248-575 mg/kg (rat)	>2000 mg/kg (rat)	5.55 mg/L – 4 h, vapor (rat) 0.59 mg/L – 4 h mist (rat)
DETA-phosphonate 15827-60-8	7180 mg/kg (rat)	7940 mg/kg (rabbit)	Not listed
ammonium chloride 12125-02-9	1650 mg/kg (rat)	Not listed	Not listed

**Information on likely sources of exposure****Ingestion**

May be harmful if swallowed and irritate gastrointestinal tract.

**Skin corrosion/irritation**

Brief contact essentially nonirritating. Repeated contact may cause sensitization.

**Inhalation**

Spray mist may cause irritation or burns to respiratory tract.

**Serious eye damage/irritation**

May cause severe eye irritation and corneal injury.

**Delayed and immediate effects and also chronic effects from short and long-term exposure****Respiratory or skin sensitization**

CAS 55566-30-8 - Has caused allergic skin reactions when tested in guinea pigs.

**Germ cell mutagenicity**

No information available.

**Carcinogenicity**

None known.

**Reproductive toxicity**

No information available.

**STOT - single exposure**

No information available.

**STOT-repeated exposure**

No information available.

**Aspiration Hazard**

None known.

**Symptoms related to the physical, chemical and toxicological characteristics**

Symptoms include eye irritation. May cause asthma-like symptoms. Respiratory symptoms, including pulmonary edema, may be delayed.

**12. ECOLOGICAL INFORMATION****Ecotoxicity**

Chemical Name	Fish	Waterflea	Algae
Bis[tetrakis(hydroxymethyl)phosphonium] sulfate 55566-30-8	94-119 mg/L: 96 h oncorhynchus mykiss LC50	15-19.4 mg/L: 48 h daphnia magna EC50	0.20 mg/L: 96 h green algae EC50
DETA-phosphonate 15827-60-8	758 mg/L: 96 h fish LC50	242 mg/L: 48 h daphnia magna EC50	Not available
ammonium chloride 12125-02-9	0.42-0.56 mg/L: 96 h oncorhynchus mykiss LC50	0.237-0.288 mg/L: 48 h Amer. lobster EC50	Not available

**Persistence and degradability**

Expected to be readily biodegradable and not persistent.

**Bioaccumulative potential**

Significant accumulation in organisms is not to be expected.

**Mobility in soil**

No information available

**Other adverse effects**

Do not release untreated in natural waters.

**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: 2810  
UN Proper Shipping Name: Toxic Liquid, Organic, N.O.S. (Bis[tetrakis(hydroxymethyl)phosphonium] sulfate)  
Transport Hazard Class(es):  
Class: TDG: 6.1  
US DOT: 6.1  
IMDG: 6.1  
Label(s): 6.1  
Packing Group: III  
Marine Pollutant: No  
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**

14 October, 2016

**Revision Date**

2 July 2025

**Revision Note**

**Revision 4** - Modifications to Section 1

**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 info

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**