SAFETY DATA SHEET

1. IDENTIFICATION

Product Identifier

Product Name IRON SULFIDE DISSOLVER

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

2. HAZARDS IDENTIFICATION

Classification

Acute toxicity, oral	Category 4
Acute toxicity, inhalation – vapors, mist	Category 3
Serious eye damage/eye irritation	Category 2A
Skin sensitizer	Category 1
Reproductive toxicity	Category 1B
Specific target organ toxicity – single exposure	Category 3
Specific target organ toxicity – repeated exposure	Category 2

Hazardous to the aquatic environment, acute hazard	Category 1

Label Elements

DANGER

Hazard Statements
Harmful if swallowed.
Toxic if inhaled.
Causes serious eye irritation.
May cause an allergic skin reaction.
May damage fertility or the unborn child <birth defects in laboratory animals>.
May cause respiratory irritation.
May cause damage to organs <kidney, liver> through prolonged or repeated exposure.
Very toxic to aquatic life.

Precautionary Statements - Prevention

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Do not breathe dust/fume/gas/mist/vapors/spray.
Wash face, hands and any exposed skin thoroughly after handling.
Do not eat, drink or smoke when using this product.
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 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.
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 SWALLOWED: Rinse mouth. Call a POISON CENTER or doctor/physician if you feel unwell.
IF exposed or concerned: get medical advice/attention.
Collect spillage.

Precautionary Statements - Storage
Store in a well-ventilated place. Keep container tightly closed. Store locked up.

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	60-100

4. FIRST AID MEASURES

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.

Skin contact — Take off immediately all contaminated clothing. Rinse skin with soap and water/shower. Wash contaminated clothing before reuse.

Inhalation — Remove victim to fresh air and keep at rest in a position comfortable for breathing Immediately call a POISON CENTER or doctor/physician.

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.

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. See Section 2 for possible delayed effects.

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.

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^3	Not available	Not available

Appropriate engineering controls

Engineering Controls Ensure adequate ventilation, especially in confined areas. Eye wash 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.

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, colorless liquid
ODOR
Acidic
ODOR THRESHOLD :
Not applicable
pH :
3.0-5.0
MELTING POINT / FREEZING POINT :
Approx. -43ºC
BOILING POINT/BOILING RANGE :
Approx. 108.5ºC
FLASH POINT :
96ºC (TCC)
EVAPORATION RATE, water = 1 :
1
FLAMMABILITY (SOLID, GAS):
Not applicable

VAPOR PRESSURE, mm Hg AT 25ºC :
12.7
VAPOR DENSITY (Air = 1) :
>1
RELATIVE DENSITY AT 20ºC:
1.370-1.410
SOLUBILITY IN WATER :
Complete
PARTITION COEFFICIENT, N-OCTANOL/WATER :
-20.39 (Log K_{ow})
AUTO-IGNITION TEMPERATURE :
279ºC
DECOMPOSITION TEMPERATURE:
≥ 160ºC
VISCOSITY:
39 mPs @ 20ºC - dynamic
FLAMMABLE LIMITS :
UPPER: Not applicable **LOWER :** Not applicable

10. STABILITY AND REACTIVITY

Reactivity
Not reactive under normal conditions.

Chemical Stability
Stable under normal conditions.

Incompatible Materials
Strong oxidizing, reducing or alkaline materials.

Conditions to Avoid
Store away from incompatible materials. Temperatures above 160°C. High pH.

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

Hazardous decomposition products
Oxides of carbon, phosphorous, and sulfur.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

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)

Information on likely sources of exposure

Serious eye damage/irritation May cause severe eye irritation and corneal injury.
Skin corrosion/irritation Brief contact essentially nonirritating. Repeated contact may cause sensitization.
Ingestion May be harmful if swallowed and irritate gastrointestinal tract.
Inhalation Spray mist may cause irritation or burns to respiratory tract.

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

Respiratory or skin sensitization Has caused allergic skin reactions when tested in guinea pigs.
Germ cell mutagenicity None known.
Carcinogenicity None known.
Reproductive toxicity Has caused birth defects in laboratory animals.
STOT - single exposure No information available.
STOT-repeated exposure In animals, effects have been reported on kidneys and liver.
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. See Section 2 for delayed effects.

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

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
Log K_{oc} = 2.2

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

TDG classification

UN 2810, Toxic Liquid, Organic, N.O.S. (Bis[tetrakis(hydroxymethyl)phosphonium] sulfate), Class 6.1, PG III

15. REGULATORY INFORMATION

All ingredients are listed on the DSL

16. OTHER INFORMATION

Preparation Date 13 October, 2016
Revision Date not applicable
Revision Note not applicable

Disclaimer
The information provided on this MSDS 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