

## 1. IDENTIFICATION

**Product Identifier**

**Product Name** FORMULA 1-HFP

**Recommended use of the chemical and restrictions on use**

**Recommended use** Water-soluble hydrogen sulfide scavenger  
**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 – mists	Category 3
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Skin sensitizer	Category 1
Specific target organ toxicity – single exposure	Category 1
Specific target organ toxicity – single exposure	Category 3
Specific target organ toxicity – repeated exposure	Category 2
Hazardous to the aquatic environment, acute hazard	
	Category 3

**Label Elements**

**DANGER**

**Hazard Statements**

Harmful if swallowed  
Toxic if inhaled  
Causes skin irritation  
Causes serious eye irritation  
May cause an allergic skin reaction  
Causes damage to organs <central nervous system, liver, gastrointestinal tract, upper respiratory tract, skin, eye, lens or cornea, testes>  
<<inhalation, ingestion, skin, eyes>>  
May cause respiratory irritation  
May causes damage to organs (kidneys) through prolonged or repeated exposure (ingestion)  
Harmful to aquatic life



**Precautionary Statements – Prevention**

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 must 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 before reuse.

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician, if you feel unwell.

IF SWALLOWED: Rinse mouth. Call a POISON CENTER or doctor/physician, if you feel unwell.

If exposed or concerned, call a POISON CENTER or doctor/physician.

Get medical advice/attention if you feel unwell.

**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 %
1,3,5-triazine-1,3,5(2H,4H,6H)-trioethanol	4719-04-4	15-40
ethylene glycol	107-21-1	10-30

### 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**

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

**Inhalation**

Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician, if you feel unwell.

**Ingestion**

Rinse mouth. Call a POISON CENTER or doctor/physician, if you feel unwell.

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

Exposure may cause irritation to eyes and skin. Prolonged contact with skin may be harmful and cause sensitization. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels. Exposure by inhalation may be toxic. Serious effects may be delayed following exposure. Product contains material that is irritating to respiratory system. Ingestion may be harmful and cause burns to mouth, throat and stomach. Product contains materials which cause damage to the nervous system (CNS), liver, kidneys, gastrointestinal tract, upper respiratory tract, skin, eyes, lens or cornea, and testes.

**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 and nitrogen.

**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

Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. Do not breathe vapor or mist. Use personal protective equipment.

### 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. Following product recovery, flush the area with water. 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 and inhalation of mist/vapors/spray. Avoid contact with skin, eyes and clothing. Ensure thorough ventilation of work areas. Smoking, eating and drinking should be prohibited in the application area.

### Conditions for safe storage, including any incompatibilities

#### Storage

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

#### Incompatible Materials

Acids, oxidizing agents

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### Control parameters

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
ethylene glycol 107-21-1	100 mg/m <sup>3</sup> Ceiling	50 ppm/125 mg/m <sup>3</sup> Ceiling	Not listed

### 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.

#### Skin and body protection

Wear protective gloves and protective clothing.

#### Respiratory Protection

Wear respiratory protection if ventilation is inadequate. 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 :**

Clear, colorless liquid

**ODOR**

Amine

**ODOR THRESHOLD :**

Not applicable

**pH :**

10.0-10.5

**MELTING POINT / FREEZING POINT :**

Approx. &lt;-49°C

**BOILING POINT/BOILING RANGE :**

Not available

**FLASH POINT :**

&gt;90°C (TCC)

**EVAPORATION RATE, water = 1 :**

Not available

**FLAMMABILITY (SOLID, GAS):**

Not applicable

**VAPOR PRESSURE, mm Hg AT 20°C :**

Not available

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

Not available

**RELATIVE DENSITY AT 20°C:**

1.110

**SOLUBILITY IN WATER :**

Complete

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

Not available

**AUTO-IGNITION TEMPERATURE :**

Not available

**DECOMPOSITION TEMPERATURE:**

Not available

**VISCOSITY:**

Not available

**FLAMMABLE LIMITS :****UPPER:** Not available **LOWER :** Not available**10. STABILITY AND REACTIVITY****Reactivity**

Not reactive.

**Chemical Stability**

Stable under normal conditions.

**Possibility of hazardous reactions**

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

**Conditions to Avoid**

Avoid extreme temperatures. Store away from incompatible materials.

**Incompatible Materials**

Acids, oxidizing agents

**Hazardous decomposition products**

Under normal conditions of storage and use, hazardous decomposition products should not be produced. Thermal decompositions can lead to release of irritating gases and vapors such as formaldehyde, oxides of carbon and nitrogen as well as other low molecular weight hydrocarbons.

**11. TOXICOLOGICAL INFORMATION****Acute toxicity****ATE<sub>mix</sub>** – LD50 oral – approx.  $\geq 1069$  mg/kg (rat), LD50 dermal – approx.  $\geq 2728$  mg/kg (rabbit), LC50 inhalation-mist – approx. 0.56 mg/L – 4 h (rat)

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
1,3,5-triazine-1,3,5(2H,4H,6H)-triethanol 4719-04-4	>488- $\leq$ 584 mg/L (rat)	>2000 mg/kg (rat)	0.371 mg/L (rat) – 4 hr
ethylene glycol 107-21-1	4000 mg/L (rat)	9530 uL/kg (rabbit)	Not listed

**Information on likely sources of exposure****Inhalation**

May cause coughing, respiratory irritation and possible damage.

**Serious eye damage/irritation**

Causes serious eye irritation. May cause pain, watering and redness.

**Skin corrosion/irritation**

Causes skin irritation, redness and possible blistering or sensitization.

**Ingestion**

May be harmful if swallowed. May cause stomach pains.

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

<b>Respiratory or skin sensitization</b>	1,3,5-triazine-1,3,5(2H,4H,6H)-triethanol (CAS 4719-04-4) - 1B May cause an allergic skin reaction
<b>Germ cell mutagenicity</b>	No information available.
<b>Carcinogenicity</b>	No information available.
<b>Reproductive toxicity</b>	No information available.
<b>STOT - single exposure</b>	1,3,5-triazine-1,3,5(2H,4H,6H)-triethanol (CAS 4719-04-4) 1 Causes damage to liver, central nervous system
<b>STOT - repeated exposure</b>	ethylene glycol (CAS 107-21-1) 2 Causes damage to kidneys
<b>Aspiration Hazard</b>	None.

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

See Section 2 &amp; 4.

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

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

Chemical Name	Fish	Waterflea	Algae
1,3,5-triazine-1,3,5(2H,4H,6H)-triethanol 4719-04-4	119 mg/L: 96 h rainbow trout LC50	26.1 mg/L: 48 h Daphnia magna EC50	Not available
ethylene glycol 107-21-1	≤41000 mg/L: rainbow trout LC50	Not available	1300-6500 mg/L: selenastrum capricornutum EC50

**Persistence and degradability**

Expected to be readily biodegradable.

**Bioaccumulative potential**

Accumulation in organisms is not to be expected.

**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****TDG classification**

UN 2810, Toxic Liquid, Organic, N.O.S. (1,3,5-triazine-1,3,5(2H,4H,6H)-triethanol), Class 6.1, PG II

**15. REGULATORY INFORMATION**

All ingredients are listed on the DSL

**16. OTHER INFORMATION****Preparation Date**

25 November, 2016

**Revision Date**

17 November, 2017

**Revision Note**

Adjustments to Section 2 &amp; Section 11 – hazard classifications and raw material information

**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**