

## 1. IDENTIFICATION

**Product Identifier**

**Product Name** FORMULA 1  
**Chemical Name** Triazine-type hydrogen sulfide scavenger

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

**Recommended use** Aqueous hydrogen sulfide control applications  
**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 1-(613)-996-6666 Internationally or 1-888-226-8832 – North America FOR 24 HOUR TRANSPORT EMERGENCY

## 2. HAZARDS IDENTIFICATION

**Classification**

Flammable Liquid	Category 3
Acute toxicity, oral	Category 3
Acute toxicity, dermal	Category 3
Acute toxicity, inhalation - mists	Category 3
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Skin sensitizer	Category 1B
Specific target organ toxicity – single exposure	Category 1
Specific target organ toxicity – single exposure	Category 3
Specific target organ toxicity – repeated exposure	Category 1
Hazardous to the aquatic environment, acute hazard	Category 3

**Label Elements**

**DANGER**

**Hazard Statements**

Flammable liquid and vapor  
 Toxic if swallowed  
 Toxic in contact with skin  
 Toxic if inhaled  
 Causes skin irritation  
 Causes serious eye irritation  
 May cause an allergic skin reaction  
 Causes damage to organs [liver, nervous system]  
 May cause respiratory irritation  
 May cause damage to organs through prolonged or repeated exposure [central nervous system (CNS), kidneys, nervous system, skin]  
 Harmful to aquatic life



**Precautionary Statements - Prevention**

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
 Keep container tightly closed.  
 Ground/bond container and receiving equipment.  
 Use explosion-proof electrical/lighting/ventilation equipment.  
 Use only non-sparking tools.  
 Take precautionary measures against static discharge.  
 Avoid breathing 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 SWALLOWED: Rinse mouth. Immediately call a POISON CENTER or doctor/physician.  
 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.  
 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician.  
 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 exposed or concerned, call a POISON CENTER or doctor/physician.

**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)-triethanol	4719-04-4	15-40
methanol	67-56-1	15-40
2-aminoethanol	141-43-5	1-5

### 4. FIRST AID MEASURES

<b>Ingestion</b>	Rinse mouth. Immediately call a POISON CENTER or doctor/physician.
<b>Skin contact</b>	Wash with plenty of water. Call a POISON CENTER or doctor/physician if you feel unwell. If skin irritation or rash occurs, get medical advice/attention. Take off immediately all contaminated clothing and wash it before re-use.
<b>Inhalation</b>	Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician.
<b>Eye contact</b>	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**

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 that 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. 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, away from incompatible materials.

#### **Incompatible Materials**

Acids, oxidizing agents

## 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
methanol 67-56-1	TWA: 200 ppm STEL: 250 ppm	TWA: 200 ppm/260 mg/m <sup>3</sup> STEL: 250 ppm/325 mg/m <sup>3</sup>	TWA: 200 ppm/260 mg/m <sup>3</sup> STEL: 250 ppm/325 mg/m <sup>3</sup>
2-aminoethanol 141-43-5	TWA : 3 ppm/7.5 mg/m <sup>3</sup> STEL : 6 ppm/15 mg/m <sup>3</sup>	3 ppm/6 mg/m <sup>3</sup>	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 to light amber liquid

### ODOR :

Amine/alcohol

### ODOR THRESHOLD :

Not applicable

### pH :

10.2-10.3

### MELTING POINT / FREEZING POINT :

< -49°C (-56°F)

### BOILING POINT/BOILING RANGE :

Not available

### FLASH POINT :

24°C / 75°F (TCC)

### EVAPORATION RATE, water = 1 :

>1

### FLAMMABILITY (SOLID, GAS) :

Not applicable

### VAPOR PRESSURE, mm Hg AT 20°C (68°F) :

Not available

### VAPOR DENSITY (Air = 1) :

Not available

### RELATIVE DENSITY AT 20°C (68°F) :

0.995-1.000

### 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

Strong oxidizing materials, acids.

### 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. ≥236 mg/kg (rat), LD50 dermal – approx. ≥687 mg/kg (rat), LC50 inhalation-mist – approx. >0.540 mg/L – 4 h (rat)

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
1,3,5-triazine-1,3,5(2H,4H,6H)-trioethanol 4719-04-4	>488-≤584 mg/L (rat)	>2000 mg/kg (rat)	0.371 mg/L (rat) – 4 hr
methanol 67-56-1	100 mg/kg (rat)	300 mg/kg (rabbit)	5 mg/L (rat)
2-aminoethanol 141-43-5	1720 mg/kg (rat)	1000 mg/kg (rabbit)	Not listed

### Information on likely sources of exposure

#### **Ingestion**

May be harmful if swallowed. May cause stomach pains.

#### **Skin corrosion/irritation**

Causes skin irritation, redness and possible blistering or sensitization.

#### **Inhalation**

May cause coughing, respiratory irritation and possible damage.

#### **Serious eye damage/irritation**

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

**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 Methanol (CAS 67-56-1) - 1 Causes damage to eyes, central nervous system
<b>STOT - repeated exposure</b>	1,3,5-triazine-1,3,5(2H,4H,6H)-triethanol (CAS 4719-04-4) 1 Causes damage to skin, CNS, kidneys
<b>Aspiration Hazard</b>	None.

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

Skin and eye irritation. Ingestion may cause irritation or burns of mouth, esophagus and stomach, abdominal pain, nausea, vomiting, diarrhea and affect the eyes, liver, and kidneys. Inhalation may cause irritation of nose, mouth, and upper respiratory tract, coughing, difficulty breathing, as well as headaches dizziness or nausea at high concentrations.

**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
methanol 67-56-1	15400 mg/L: 96 h Lepomis macrochirus LC50	>10000 mg/L: 48 h Daphnia magna EC50	22000 mg/L: 96 h Scenedesmus capricornutum EC50
2-aminoethanol 141-43-5	150 mg/L: 96 h rainbow trout LC50	Not available	Not available

**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**

UN Number:	1992
UN Proper Shipping Name:	Flammable Liquid, Toxic, N.O.S. (methanol solution)
Transport Hazard Class(es) Class:	TDG: 3 (6.1) US DOT: 3 (6.1) IMDG: 3 (6.1)
Label(s):	3 (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/NDL)

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:	2
Flammability:	3
Reactivity:	0

## 16. OTHER INFORMATION

Preparation Date

29 April 2016

Revision Date

16 April 2018

Revision Note

Revision 2 - Modifications to Section 1, 7, 11, 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**