SAFETY DATA SHEET

1. IDENTIFICATION

Product Identifier
Product Name FORMULA 1

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

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/sparks/open flames/hot surfaces. 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 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 (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 SWALLOWED: Rinse mouth. Immediately call a POISON CENTER or doctor/physician.
If exposed or concerned, call a POISON CENTER or doctor/physician.

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

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

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. 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.

Inhalation — Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician.

Ingestion — Rinse mouth. Immediately call a POISON CENTER or doctor/physician.

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

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^3 STEL: 250 ppm/325 mg/m^3	TWA: 200 ppm/260 mg/m^3 STEL: 250 ppm/325 mg/m^3
2-aminoethanol 141-43-5	TWA : 3 ppm/7.5 mg/m^3 STEL : 6 ppm/15 mg/m^3	3 ppm/6 mg/m^3	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 :
≤ -49ºC
BOILING POINT/BOILING RANGE :
Not available
FLASH POINT :
24ºC (TCC)
EVAPORATION RATE, water = 1 :
>1
FLAMMABILITY (SOLID, GAS):
Not applicable
VAPOR PRESSURE, mm Hg AT 20ºC :
Not available
VAPOR DENSITY (Air = 1) :
Not available
RELATIVE DENSITY AT 20ºC:
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_{mix} – 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)-triethanol 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

Inhalation May cause coughing, respiratory irritation and possible damage.
Serious eye damage/irritation Causes serious eye damage. 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

Respiratory or skin sensitization	1,3,5-triazine-1,3,5(2H,4H,6H)-triethanol (CAS 4719-04-4) - 1B May cause an allergic skin reaction
Germ cell mutagenicity	No information available.
Carcinogenicity	No information available
Reproductive toxicity	No information available
STOT - single exposure	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
STOT - repeated exposure	1,3,5-triazine-1,3,5(2H,4H,6H)-triethanol (CAS 4719-04-4) 1 Causes damage to skin, CNS, kidneys
Aspiration Hazard	None.

Symptoms related to the physical, chemical and toxicological characteristics
See Section 2 & 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
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

TDG classification

UN 1992, Flammable Liquid, Toxic, N.O.S. (methanol solution), Class 3 (6.1), PG III

15. REGULATORY INFORMATION

All ingredients are listed on the DSL

16. OTHER INFORMATION

Preparation Date	29 April, 2016
Revision Date	17 November, 2017
Revision Note	Adjustment to Section – hazard classifications

Disclaimer
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End of SDS