

**SAFETY DATA SHEET****SECTION I - PRODUCT IDENTIFICATION**

<b>Product Identifier:</b>	Vapro HTF-100
<b>Other means of identification:</b>	Inhibited Heat Transfer Fluid
<b>Recommended use:</b>	Inhibited Ethylene Glycol for anti-freeze
<b>Supplier's Name:</b>	Magna Chemical Canada Inc.
<b>Address:</b>	1450 Government Road West, Kirkland Lake ON P2N 2E9
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<b>Emergency only:</b>	Canutec 24hr Tel: 613 996 6666
<b>Revision Date:</b>	15 January 2019

**SECTION II – HAZARDS IDENTIFICATION****GHS CLASSIFICATION:**

Acute Toxicity, Oral: Category 4

Serious Eye damage/irritation: Category 2

Specific target organ toxicity after repeated exposure: Category 2

**GHS LABEL ELEMENTS SYMBOL(S)****SIGNAL WORDS:**

Warning

**GHS HAZARDS STATEMENTS:**

H302: Harmful if swallowed

H315: Causes skin irritation

H319: Causes serious eye irritation

H: 373: May cause damage to organ through prolonged or repeated exposure.

**GHS PRECAUTIONARY STATEMENTS:****PREVENTION**

P264: Wash your hands and face thoroughly after handling.

P260: Do not breathe dust/fume/gas/mist/vapours/spray.

P270: Do not eat, drink or smoke when using this product.

P280: Wear protective gloves/protective clothing/ eye protection/ face protection.

**RESPONSE:**

P301 + P312: IF SWALLOWED: Call a POISON CENTRE or doctor or physician if you feel unwell.

P330: Rinse mouth.

P302 + P352: IF ON SKIN: Wash with plenty of soap and water.

P314: Get medical advice/attention if you feel unwell.

P321: Specific treatment (see on this label).

P332 + P313: If skin irritation occurs: Get medical advice/ attention.

P362: Take off contaminated clothing and wash before reuse

P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337 + P313: If eye irritation persists: Get medical advice/attention.

**SECTION III – COMPOSITION / INFORMATION ON INGREDIENTS**

<b>Ingredient Name:</b>	<b>Weight %:</b>	<b>CAS#</b>
Ethylene Glycol	90-95	107-21-1
Proprietary corrosion inhibitor	Balance	Mixture

**SECTION IV – FIRST AID MEASURES****Inhalation**

Remove person to an uncontaminated area. Administer oxygen if necessary. If breathing has stopped, administer CPR.

**Skin Contact**

Remove contaminated clothing. Wash affected area with water. If irritation persists, call physician.

**Eye Contact**

Immediately flush with plenty of water for at least 15 minutes. Make sure to flush under eyelids. Consult physician immediately.

**Ingestion**

DO NOT INDUCE VOMITING. Get immediate medical attention.

**Major Disease and Harm Effects:**

Ethylene Glycol can be absorbed through skin eczema. A dosage of 100 ml can cause death.

**First Aid Personal Protection:**

Must wear class C protective equipment for performing first-aid in safe area.

**Prompt to doctor:**

For ingestion, consider gastric lavage.

**SECTION V – FIRE FIGHTING MEASURES****Suitable Fire-extinguishing media**

Foam (alcohol-resistant foam), powder, and carbon dioxide are effective fire-extinguishing agents.

**Specific hazards arising from the chemical**

Product is noncombustible. Water Spray (Fog); Dry Chemical; or Foam may be used where product is stored.

**Special protective actions for fire fighters**

Firemen should wear self-contained breathing apparatus and protective clothing when fighting chemical fires.

**SECTION VI – ACCIDENTAL RELEASE MEASURES****Personal Precautions, Protective Equipment and Emergency Procedures**

Avoid contact with spilled or released material. Immediately remove all contaminated clothing. For guidance of selection of personal protective equipments see Chapter 8 of this Safety Data Sheet.

**Environmental Precautions**

Prevent spills from entering drains or sewers and contact with soil.

**Methods and materials for contaminated and cleaning up**

Do not touch or walk through spilled material. Prevent the spilled substances from entering the drainage, canals or closed spaces. If safety permits, try to stop or reduce the spillage. Surround the leakage with sand, soil or other absorbing substances that will not react with the leaking substance.

For small amount of leakage: absorb using absorbents that will not react with the leaking substance. Contaminated absorbents are as hazardous as the leakage and must be kept in covered and labeled container.

For large amount of leakage: Contact the fire department, emergency rescue agency and supplier for assistance.

## SECTION VII – HANDLING AND STORAGE

### Precautions for safe handling

Do not swallow. Avoid eyes and skin contact. Wear recommended protective equipment. Use only with adequate ventilation. Wash thoroughly after handling material.

### Conditions for safe storage, including any incompatibilities

Keep container tightly closed when not in use. Store in dry, cool, well-ventilated area away from incompatibles.

## SECTION VIII – EXPOSURE CONTROLS/PERSONAL PROTECTION

### Occupational Exposure Limits:

Ceiling 50 ppm

### Appropriate engineering control measure

Overall gas exchange installation. Local exhaust ventilation system must be required during heating and formation of dewdrops. Provide sufficient fresh air supply to supplement the air discharged by the exhaust ventilation system.

### Individual protection measure

#### Protective Gloves

Neoprene/ PVC gloves.

#### Eye Protection

Safety glasses with side shields are recommended.

#### Respiratory Protection

Not required under normal use conditions with good general ventilation. Protect against generated mist/ spray back.

#### Hygienic Work Practices

Wash hand after use. Do not eat, drink or smoke in immediate area.

## SECTION IX – PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance Physical State</b>	Liquid
<b>Color</b>	Clear
<b>Odour</b>	Sweet
<b>Odour Threshold</b>	0.08 ppm
<b>pH</b>	8±0.5
<b>Melting Point</b>	Not applicable
<b>Freezing Point</b>	Approx 0°C
<b>Boiling Point</b>	Approx 198°C
<b>Flash Point</b>	111°C (Closed Cup)
<b>Evaporation Rate</b>	Not available
<b>Flammability (solid, gas)</b>	Not applicable
<b>Upper explosive limit</b>	15.3%
<b>Lower explosive limit</b>	3.2%
<b>Vapour Pressure</b>	0.05 mmHg
<b>Vapour Density</b>	2.14 (air = 1)
<b>Relative Density</b>	1.1135 g/cm <sup>3</sup> ± 0.05
<b>Solubility</b>	Completely soluble in water
<b>Partition coefficient: n-octanol/water</b>	-1.93 ~ -1.36
<b>Viscosity</b>	Free Flowing Liquid
<b>Auto-ignition Temperature</b>	398°C

## SECTION X – STABILITY & REACTIVITY

### Reactivity/Incompatible materials

React with strong acid and oxidizing materials. Tetraphosphorous trisulfide (such as per chloric acid, nitrate, butyric acid): Increases the danger of fire and explosion.

### Chemical stability

Stable under normal temperature and pressure.

### Possible of hazardous reaction

Data not available.

### Conditions to avoid

Heat, contact with incompatible materials, open flame. DC silver –copper wire.

### Hazardous decomposition products

Burning may produce oxide of carbons and other substances.

## SECTION XI – TOXICOLOGICAL INFORMATION

### Oral LD 50

### LC 50

Ethylene Glycol 4700 mg/kg (Rat)

12 mg/m<sup>3</sup>

### PRIMARY ROUTES OF EXPOSURE

☒eye    ☒skin    ☒oral    ☐inhalation    ☐other

**Eyes:** Classified as a serious eye irritant. Liquid will cause irritation and inflammation of the eyelids but will not cause permanent damage.

**Skin:** Classified as a skin irritant. Exposure to the skin may give rise to irritation. Prolonged and persistent contact may lead to dermatitis through skin de-fatting.

**Inhalation:** Unlikely to present any significant hazard at ambient temperature. Excessive exposure to mists caused by atomising systems may cause irritation to eyes and respiratory tract.

**Ingestion:** Induces symptoms of suppression of central nervous system such as nausea, vomiting, lower abdominal pain, feebleness, fatigue, dizziness, absent-mindedness, convulsion, shocks, etc. Will cause death due to respiratory and cardiovascular failure. A dosage of 100 ml may be lethal. If patient survives, may have kidney failure after several days. May cause blocked vision in some cases.

Long-term toxicity: None of the components are listed as CMR\* (\*Carcinogenic, mutagenic or reproductive toxin).

## SECTION XII – ECOLOGICAL INFORMATION

**Eco-toxicity:** LC50 (Fish): 18500 ~ 4100 mg/L/96H

**Bio-concentration Factor (BCF):** 10~190

**Mobility:** The product should not be allowed to enter drains or watercourses or be deposited where it can affect ground or surface waters. Avoid transfer into the environment.

**Persistence and Degradability:** Theoretically, in the presence of 100% oxygen, ethylene glycol will decompose completely in 1-4 days. In reality, it will probably take several weeks. Will decompose in water and will not absorb the deposits.

**Bio-accumulative Potential:** Not expected to bio-accumulate.

## SECTION XIII – DISPOSAL CONSIDERATIONS

Dispose of in accordance with existing Federal, State and local environmental regulation.

**SECTION XIV – TRANSPORT INFORMATION**

<b>Proper Shipping Name</b>	Ethylene Glycol
<b>IMO Class</b>	N.A.
<b>Hazard Label (S)</b>	Not Regulated
<b>UN OR ID Number</b>	N.A.
<b>MPA Group</b>	N.A.

**SECTION XV – REGULATORY INFORMATION**

No information available for this product.

**SECTION XVI – OTHER INFORMATION**

**H.M.I.S rating:** Health - 2, Fire – 0, Reactivity – 1, Protection – B

Where

0 = Insignificant

1 = Slight

2 = Moderate

3 = Serious

4 = Severe

A = Safety Glass

B = Safety Glass & Gloves

C = Safety Glass, Gloves & Apron

D = Face Shield, Gloves & Apron

Replaces edition of: 10 March 2016

**H.M.I.S:** Hazardous Materials Identification System

**CAS#:** Chemical Abstracts Service Number

**ACGIH:** American Conference of Governmental Industrial Hygienists

**OSHA:** Occupational Safety and Health Administration

**TLV:** Threshold Limit Value

**PEL:** Permissible Exposure Limit

**REL:** recommended exposure limit

**TWA8:** The time weighted average concentration for a normal 8-hour workday and a 40-hour workweek, to which nearly all workers may be repeatedly exposed, day after day, without adverse effect.

**N.A:** Not applicable

**N/E:** Not establish

**N.D:** Not determine

**C:** Ceiling (The concentration that should not be exceeded during any part of the working exposure).

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