

### Section 1 - Chemical Product and Company Identification

<b>Product Name</b>	CFR OP 101 Ethylene Glycol Inhibitor
<b>Synonyms</b>	OP 101, OP-101
<b>Product Use</b>	Various use, chemical intermediate, heat transfer fluid
<b>Restrictions On Use</b>	Not Applicable
<b>Supplier</b>	CFR Chemicals 38451 Range Road 22 County of Red Deer T4E 2N6
<b>General Assistance</b>	1 (877) 269-3419
<b>Emergency Telephone</b>	<b>613-966-6666 (CANUTEC 24 Hour Phone Number)</b>
<b>Date of Preparation of SDS</b>	<b>April 1, 2017</b>

### Section 2 – Hazard Identification

**Signal Word** Danger

**GHS Pictogram(s)**



**Hazard Statement:**

H302 Harmful if swallowed.  
 H314 Causes severe skin burns and eye damage.

**Precautionary Statement**

P260 Do not breath dust/gas/mist/vapours.  
 P264 Wash skin thoroughly after handling.  
 P270 Do not eat, drink or smoke when using this product.  
 P280 Wear protective gloves/eye protection/face protection.

**Response**

P321 Specific treatment (see supplemental first aid instructions on this label).  
 P363 Wash contaminated clothing before reuse.  
 P301 + P312 IF SWALLOWED: Immediately call a POISON Center or doctor/physician.  
 P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
 P303 + P361 + P353 IF ON SKIN (OR HAIR): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
 P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing  
 P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

**Storage**

P405 Store locked up.

**Disposal**

P501 Dispose of contents/container to an approved waste disposal unit.

**GHS Classification**

Acute Toxicity (oral) (Category 4)  
 Skin corrosion/irritation (Category 1A)

### HMIS Classification

Health Hazard	1
Chronic Health Hazard	*
Flammability	1
Physical Hazards	0

### Potential Health Effects

<b>Inhalation</b>	May be harmful if inhaled. Causes respiratory tract irritation.
<b>Skin</b>	May be harmful if absorbed through skin.
<b>Eye</b>	Causes eye irritation.
<b>Ingestion</b>	May be harmful if swallowed.

## Section 3 – Composition Information on Ingredients

HAZARDOUS INGREDIENT, Common Name	Hazardous Ingredient, Synonyms	PERCENT	CAS NUMBER
Potassium hydroxide	Caustic Potash, Lye	10 – 41.6%	1310-5-3
Phosphoric acid, 75%, aqueous solution	Orthophosphoric Acid	10 – 40%	7664-38-2
Ethylene Glycol	1,2-ethanediol, EG, Glycol	1 – 40%	107-21-1
Disodium tetraborate, pentahydrate	Not Applicable	1 – 20%	12173-04-3
Sodium 4(or 5)-methyl-1H-benzotriazolide	Not Applicable	0.49 – 10.2%	64665-57-2
Polydimethylsiloxane	Not Applicable	0.5 – 2%	63147-62-9
Silica filled polydimethylsiloxane	Not Applicable	0.01 – 1%	67762-90-7
Sucrose distearate	Not Applicable	0.01 – 1%	27915-16-0

\* = Various \*\* = Mixture \*\*\* = Proprietary

## Section 4 - First Aid Measures

<b>Inhalation</b>	Move casualty to fresh air and keep at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention.
<b>Eye Contact</b>	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower lids. Check for and remove contact lenses. Continue to rinse for at least 15 minutes. Get medical attention.
<b>Skin Contact</b>	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
<b>Ingestion</b>	Get medical attention immediately. Call a poison control centre or physician. If alert, rinse mouth and drink ½ to 1 glass of water to help dilute the material. Do not give liquids to a drowsy, convulsion, or unconscious patient. Do NOT induce vomiting. If vomiting occurs, the head should be kept low so vomit does not enter the lungs. If unconscious, place in recovery position and get medical attention

immediately. Maintain an open airway. Loosen tight clothing such as collar, tie, belt or waistband.

**Most Important Symptoms/Effects both Acute and Delayed**

Causes severe skin burns and irritation. Swallowing a small quantity of this material will result in a severe health hazard.

**Note to Physician**

No information available.

**Section 5 – Fire-Fighting Measures**

<b>Flash Point (°C)</b>	Not applicable
<b>Flash Point Method</b>	PMCC
<b>Auto Ignition Temperature</b>	No data available
<b>Conditions of Flammability</b>	Not flammable or combustible.
<b>Extinguishing Media</b>	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
<b>Unsuitable Extinguishing Media</b>	Water jet.
<b>Unusual Fire/Explosion Hazard</b>	No data available.
<b>Hazardous Combustion Products</b>	Carbon oxides.
<b>Fire Fighting Equipment</b>	Wear appropriate protective equipment and self-contained breathing apparatus with a full face-piece operated in positive pressure mode.
<b>Special Precautions for Firefighters</b>	No data available.

**Section 6 – Accidental Release Measures**

<b>Personal precautions</b>	Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapour can accumulate in low areas.
<b>Environmental precautions</b>	Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.
<b>Methods and materials for containment and cleaning up</b>	Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

**Section 7 – Handling and Storage**

<b>Precautions for safe handling</b>	Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.
<b>Conditions for safe storage</b>	Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Hygroscopic.
<b>Incompatible Materials</b>	Strong Acids, Strong Bases.

### Section 8 – Exposure Controls / Personal Protection

#### Occupational Exposure Limits

Ingredient Name	Exposure Limits
Ethylene Glycol	<b>Canada, Alberta OHSC Code</b> 100mg/m <sup>3</sup> <b>ACGIH TLV</b> TLV: 100mg/m <sup>3</sup>
Potassium hydroxide	<b>Canada, Alberta OHSC Code</b> None established <b>ACGIH</b> Ceiling: 2mg/m <sup>3</sup>
Phosphoric acid, 75%, aqueous solution	<b>Canada, Alberta OHSC Code</b> 1mg/m <sup>3</sup> <b>ACGIH</b> TWA: 1mg/m <sup>3</sup> STEL: 3mg/m <sup>3</sup> <b>OSHA PEL</b> TWA 1mg/m <sup>3</sup>
Disodium tetraborate, pentahydrate	<b>Canada, Alberta OHSC Code</b> TWA: 1mg/m <sup>3</sup> Ceiling: 3mg/m <sup>3</sup> <b>ACGIH</b> TWA: 2mg/m <sup>3</sup>
Sodium 4(or 5)-methyl-1H-benzotriazolide	<b>Canada, Alberta OHSC Code</b> None established
Polydimethylsiloxane	<b>Canada, Alberta OHSC Code</b> None established
Silica filled polydimethylsiloxane	<b>Canada, Alberta OHSC Code</b> None established
Sucrose distearate	<b>Canada, Alberta OHSC Code</b> TWA: 10mg/m <sup>3</sup> (Stearates in general)

#### Personal protective equipment

<b>Eye/face protection</b>	Chemical safety glasses with side shields to prevent eye contact. As a general rule do not wear contact lenses when handling chemicals. If contact is possible, the following protection should be worn: Splash goggles. Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases, or dusts. If inhalation hazards exist, a full-face respiratory may be required instead.
<b>Skin protection</b>	Wear chemical resistant gloves, impermeable protective clothing and safety shoes. Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
<b>Respiratory protection</b>	Use a properly fitted, air-purifying or supplied air respirator complying with an approved standard if a risk assessment indicates this is necessary.
<b>General hygiene</b>	

<b>Considerations</b>	Handle in accordance with good industrial hygiene and safety. Eye wash fountains and safety showers must be easily accessible.
<b>Specific engineering controls</b>	Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. Use explosion-proof ventilation equipment.

### Section 9 – Physical and Chemical Properties

<b>Physical State</b>	Liquid	<b>Water Solubility</b>	miscible
<b>Appearance &amp; Odour</b>	Clear, colourless to pale yellow. Odourless.	<b>Boiling Point</b>	100°C
<b>Vapour Pressure</b>	17 mmHg (20.0°C)	<b>Boiling Point Range</b>	100 – 196°C
<b>Vapour Density</b>	>1 (Air = 1)	<b>Melting Point</b>	<-40°C
<b>Specific Gravity</b>	1.44	<b>Freezing Point</b>	<-40°C
<b>Partition coefficient (n-octonal/water)</b>	Not available.	<b>Lower Explosive Limit (LEL)</b>	Not Available
<b>pH</b>	10.30 (neat)	<b>Upper Explosive Limit (UEL)</b>	Not Available
<b>Flashpoint (Method)</b>	Not flammable	<b>Auto Ignition temperature</b>	Not Available
<b>Odour Threshold</b>	Not available.	<b>Evaporation Rate</b>	Not available.
<b>Flammability (Solid, Gas)</b>	Not available.		
<b>Decomposition Temperature</b>	Not available.	<b>Viscosity</b>	Not available.

### Section 10 – Stability and Reactivity

<b>Reactivity</b>	Thermal decomposition generates: Corrosive vapours.
<b>Chemical stability</b>	Stable under recommended storage conditions.
<b>Possibility of hazardous reactions</b>	No data available.
<b>Conditions to avoid</b>	No data available.
<b>Materials to avoid</b>	Strong acids. Strong bases.
<b>Hazardous decomposition products</b>	Carbon oxides.

### Section 11- Toxicological Information

#### Information on Likely Routes of Exposure

**Inhalation:**

May be harmful if inhaled. May cause respiratory tract irritation.

**Skin contact**

Causes severe skin burns and irritation.

**Eye contact**

May cause eye irritation.

**Ingestion**

May cause abdominal discomfort or pain, nausea, vomiting, dizziness, drowsiness, malaise, blurring of vision, irritability, lumbar pain, oliguria, uremia, and central nervous system effects, including irregular eye movements, convulsions and coma. Cardiac failure, pulmonary edema, and severe kidney damage may develop. May be fatal if swallowed, lethal dose in adult humans for ethylene glycol is approximately 100 mL

### Acute and Chronic Toxicity

Poison. Toxic if swallowed. If swallowed there is a risk of blindness.

### Acute toxicity

Product/Ingredient Name	Result	Species	Dose	Exposure
Ethylene Glycol	LD50 Oral	Rat	4700mg/kg	-
	LD50 Dermal	Rabbit	10626mg/kg	-
Potassium hydroxide	LD50 Oral	Rat	333mg/kg	-
Phosphoric acid, 75%, aqueous solution	LD50 Oral	Rat	4400mg/kg	-
Disodium tetraborate, pentahydrate	LD50 Oral	Rat	>2000mg/kg	-
	LD50 Dermal	Rabbit	>2000mg/kg	-
Sodium 4(or 5)-methyl-1H-benzotriazolide	LD50 Oral	Rat	640 – 1980mg/kg	-
	LD50 Dermal	Rabbit	>2000mg/kg	-
Polydimethylsiloxane	No data available			
Silica filled polydimethylsiloxane	No data available			
Sucrose distearate	No data available			

**Skin corrosion/irritation** Causes severe skin burns and eye damage.

### Serious eye damage/ Eye irritation

Not classified.

### Respiratory or skin sensitization

Not classified.

### Mutagenicity

Not classified.

### Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

### Reproductive toxicity

Not classified.

### Teratogenicity

Not classified.

### Specific target organ toxicity - single exposure (Globally Harmonized System)

No data available.

### Specific target organ toxicity - repeated exposure (Globally Harmonized System)

No data available.

### Aspiration hazard

No data available.

### Delayed and Immediate Effects and also Chronic Effects from Short and Long Term Exposure

#### Short Term Exposure

**Potential immediate Health Effects** No data available.

**Potential Delayed Health Effects** No data available.

#### Long Term Exposure

**Potential immediate Health Effects** No data available.

**Potential Delayed Health Effects** No data available.

**Potential Chronic Effects** No data available.

**Synergistic effects**                      No data available

### Section 12 – Ecological Information

**Toxicity**

Product / Ingredient Name	Result	Species	Exposure
Ethylene Glycol	LC50 18500mg/L	Fish – Oncorhynchus mykiss	96 Hr
	LC50 >1000mg/L	Fish – Leuciscus idus	48 Hr
	EC50 74000mg/L	Daphnia – Daphnia magna	24 Hr
Potassium hydroxide	LC50 28.6mg/L	Fish – Pisces	96 Hr
Phosphoric acid, 75%, aqueous solution	LC50 138mg/L	Fish – Pisces	96 Hr
Disodium tetraborate, pentahydrate	LC50 100 – 1000mg/L	Fish – Pisces	96 Hr
	EC50 340mg/L	Daphnia – Daphnia magna	24 Hr
Sodium 4(or 5)-methyl-1H-benzotriazolide	LC 50 25mg/L	Fish – Oncorhynchus mykiss	96 Hr
	EC 50 280mg/L	Daphnia – Daphnia magna	24 Hr
Polydimethylsiloxane	No data available		
Silica filled polydimethylsiloxane	No data available		
Sucrose distearate	No data available		

**Persistence and degradability**    No data available.  
**Bioaccumulative potential**        Does not bioaccumulate.  
**Mobility in soil**                        No data available.  
**PBT and vPvB assessment**        No data available

### Section 13 – Disposal Considerations

**Product**

Do not discharge substance/product into sewer system. Dispose of in accordance with national, regional, and local regulations.

**Contaminated packaging**

Dispose of as unused product in a licensed facility. Recommend crushing, puncturing, or other means to prevent unauthorized use of used containers. Do not cut, weld, or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled materials and runoff and contain with soil, waterways, drains, and sewers.

### Section 14 - Transportation Information

CANADA Transportation of Dangerous Goods (TDG)

**Shipping Name**                      UN3082, Environmentally Hazardous Substances, liquid, N.O.S. (Ethylene Glycol), 9, III  
**Class**                                      9  
**UN Number**                            UN3082  
**Packaging Group:**                    III



# Safety Data Sheet - GHS

## CFR OP 101

Date of Revision: June 29, 2019

### Section 15 – Regulatory Information

#### **DSL (Canadian Domestic Substances List) and CEPA (Canadian Environmental Protection Act)**

All components of this product are in compliance with the chemical notification requirements of the NSN Regulations under CEPA, 1999.

#### **TSCA Inventory**

All components are listed or exempted.

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations and the SDS contains all the information required by the Hazardous Products Regulations.

### Section 16 – Other Information

#### REVISION SUMMARY:

Date of Preparation	April 1, 2017
Date of Revision	June 29, 2019

SDS Prepared by: CFR Lab Manager

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