



# Safety Data Sheet - GHS

## CFR Inhibited TEG 90

Date of Revision: June 19, 2019

### Section 1 - Chemical Product and Company Identification

**Product Name** CFR Inhibited TEG 90  
**Synonyms** Inhibited Triethylene Glycol 90, ITEG 90  
**Product Use** Various use, chemical intermediate, heat transfer fluid  
**Restrictions On Use** Not Applicable  
**Supplier** CFR Chemicals  
38451 Range Road 22  
County of Red Deer T4E 2N6  
**General Assistance** 1 (877) 269-3419  
**Emergency Telephone** **Not Dangerous Goods – Call General Assistance**  
**Date of Preparation of SDS** **April 1, 2017**

### Section 2 – Hazard Identification

**Signal Word** Warning  
**GHS Pictogram(s)** None  
**Hazard Statement:**  
H316 Causes mild skin irritation.  
H320 Causes eye irritation.  
**Precautionary Statement**  
P264 Wash skin thoroughly after handling.  
**Response**  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P332 + P313 IF SKIN IRRITATION OCCURS: Get medical advice / attention.  
P337 + P313 IF EYE IRRITATION PERSISTS: Get medical advice / attention.  
**Storage**  
No Statements.  
**Disposal**  
P501 Dispose of contents/container to an approved waste disposal unit.  
**GHS Classification** Skin irritation (Category 3)  
Eye irritation (Category 2B)  
**HMIS Classification**  
Health Hazard 1  
Chronic Health Hazard \*  
Flammability 1  
Physical Hazards 0

### Section 3 – Composition Information on Ingredients

HAZARDOUS INGREDIENT, Common Name	Hazardous Ingredient, Synonyms	PERCENT	CAS NUMBER
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Triethylene Glycol	TEG, 2,2'-(ethylenedioxy)diethanol; TEG; 2,2'-[1,2-ethanediy]bis(oxy)]bisethanol; Triglycol	90%	112-27-6
Water	H <sub>2</sub> O, Aqua	5 –10%	7732-18-5
Potassium hydroxide	Caustic Potash, Lye	0 – 1%	1310-5-3
Phosphoric acid, 75%, aqueous solution	Orthophosphoric Acid	0 – 1%	7664-38-2
Ethylene Glycol	1,2-ethanediol, EG, Glycol	0 –1%	107-21-1
Disodium tetraborate, pentahydrate	Aqua	0 – 0.9%	12173-04-3
Sodium 4(or 5)-methyl-1H-benzotriazolide	Not Applicable	0 – 0.45%	64665-57-2
Sodium Nitrite	Not Applicable	0 – 0.36%	7362-00-00
Non-hazardous corrosion inhibitors and pH buffers	Not Applicable	0 – 0.15%	Trade Secret
Polydimethylsiloxane	Not Applicable	0 – 0.1%	63147-62-9
Silica filled polydimethylsiloxane	Not Applicable	0 – 0.04%	67762-90-7
Sucrose distearate	Not Applicable	0 – 0.04%	27915-16-0

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

### Chemical Formula

Not Applicable

## 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.
<b>Most Important Symptoms/Effects both Acute and Delayed</b>	Harmful if swallowed. Symptoms may include headache, nausea, vomiting.. May cause slight eye and skin irritation. Symptoms include: Redness, swelling, itching and dryness.
<b>Note to Physician</b>	Consult a physician. Show this safety data sheet to the doctor in attendance.

**Section 5 – Fire-Fighting Measures**

<b>Flash Point (°C)</b>	Not Flammable
<b>Flash Point Method</b>	PMCC
<b>Auto Ignition Temperature</b>	347°C
<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. Strong oxidizing agents.

**Section 8 – Exposure Controls / Personal Protection****Occupational Exposure Limits**

<b>Ingredient Name</b>	<b>Exposure Limits</b>
Triethylene Glycol	<b>ACGIH TLV</b> Ceiling: 50ppm, 127mg/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>
Ethylene Glycol	<b>Canada, Alberta OHSC Code</b>
	100mg/m <sup>3</sup>
	<b>ACGIH</b>
	TLV: 100mg/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
Sodium Nitrite	<b>Canada, Alberta OHSC Code</b>
	None established
	<b>ACGIH</b>
	None Established
	<b>OSHA</b>
	None Established
Corrosion Inhibitors and pH Buffers	<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

#### Eye/face protection

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.

#### Skin protection

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.

#### Respiratory protection

Use a properly fitted, air-purifying or supplied air respirator complying with an approved standard if a risk assessment indicates this is necessary.

#### General hygiene

#### Considerations

Handle in accordance with good industrial hygiene and safety. Eye wash fountains and safety showers must be easily accessible.

#### Specific engineering controls

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. Odourless.	<b>Boiling Point</b>	>100°C
<b>Vapour Pressure</b>	<1 mmHg (20.0°C) (TEG)	<b>Boiling Point Range</b>	Not applicable
<b>Vapour Density</b>	5.18(Air = 1) (TEG)	<b>Melting Point</b>	-21°C
<b>Specific Gravity</b>	1.10 – 1.12	<b>Freezing Point</b>	-21°C
<b>Partition coefficient (n-octonal/water)</b>	Not available.	<b>Lower Explosive Limit (LEL)</b>	0.9% (TEG)
<b>pH</b>	Not available.	<b>Upper Explosive Limit (UEL)</b>	9.2% (TEG)
<b>Flashpoint (Method)</b>	Not Flammable.	<b>Auto Ignition temperature</b>	347°C (TEG)
<b>Odour Threshold</b>	Not available.	<b>Evaporation Rate</b>	Not available.
<b>Flammability (Solid, Gas)</b>	Not available.	<b>Viscosity</b>	Not available.
<b>Decomposition Temperature</b>	Not available.		

### Section 10 – Stability and Reactivity

<b>Reactivity</b>	No specific test data related to reactivity available for this product.
<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 oxidizing agents. Strong bases
<b>Hazardous decomposition products</b>	Carbon oxides.

### Section 11- Toxicological Information

#### Information on Likely Routes of Exposure

<b>Inhalation</b>	May be harmful if inhaled. May cause respiratory tract irritation.
<b>Skin contact</b>	Harmful if absorbed through the skin. May cause skin irritation.
<b>Eye contact</b>	May cause eye irritation.
<b>Ingestion</b>	May cause abdominal discomfort or pain, nausea, vomiting
<b>Acute and Chronic Toxicity</b>	No data available

#### Acute toxicity

Product/Ingredient Name	Result	Species	Dose
Triethylene Glycol	LD50 Oral	Rat	17000mg/kg
	LD50 Dermal	Rabbit	22500mg/kg
Potassium hydroxide	LD50 Oral	Rat	333mg/kg
Phosphoric acid, 75%, aqueous solution	LD50 Oral	Rat	4400mg/kg
Ethylene Glycol	LD50 Oral	Rat	4700mg/kg
	LD50 Dermal	Rabbit	10626mg/kg



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Disodium tetraborate, pentahydrate	LD50 Oral LD50 Dermal	Rat Rabbit	>2000mg/kg >2000mg/kg
Sodium 4(or 5)-methyl-1H-benzotriazolide	LD50 Oral LD50 Dermal	Rat Rabbit	640 – 1980mg/kg >2000mg/kg
Sodium nitrite	LD50 Oral	Rat	4700mg/kg
Corrosion Inhibitors and pH Buffers	No data available		
Polydimethylsiloxane	No data available		
Silica filled polydimethylsiloxane	No data available		
Sucrose distearate	No data available		

**Skin corrosion/irritation** Slightly irritating to skin.

**Serious eye damage/ Eye irritation** Slightly irritating to the eye.

**Respiratory or skin sensitization** No data available. Not expected to be a sensitizer.

**Mutagenicity** No known significant effects or critical hazards.

**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.

ACGIH: 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 ACGIH.

**Reproductive toxicity** No data available.

**Teratogenicity** No data available.

**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
Triethylene Glycol	Acute LC50 >100mg/L	Fish – Leuciscus idus	96 Hr
	Acute EC50 46500mg/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



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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
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
Sodium Nitrite	LC50 0.19mg/L	Fish – Oncorhynchus mykiss	96 Hr
Corrosion Inhibitors and pH Buffers	No data available		
Polydimethylsiloxane	No data available		
Silica filled polydimethylsiloxane	No data available		
Sucrose distearate	No data available		
<b>Persistence and degradability</b>	>70% - readily biodegradable		
<b>Bioaccumulative potential</b>	No bioaccumulation is to be expected (log Pow ≤4)		
<b>Mobility in soil</b>	No data available.		
<b>PBT and vPvB assessment</b>	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)

**Not Dangerous Goods**

### 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.



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### Section 16 – Other Information

REVISION SUMMARY:

Date of Preparation	April 1, 2017
Date of Revision	June 19, 2019

SDS Prepared by: CFR Lab Manager

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