Safety Data Sheet - GHS
CFR Inhibited TEG 60

Date of Revision: April 1, 2025

Section 1 - Chemical Product and Company Identification

Product Name	CFR Inhibited TEG 60
Synonyms	Inhibited Triethylene Glycol 60, ITEG 60
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

Triethylene Glycol	TEG, 2,2'-(ethylenedioxy)diethanol; TEG; 2,2'-[1,2-ethanediylbis(oxy)]bisethanol; Triglycol	60%	112-27-6
Water	H_2O, Aqua	35 – 40%	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

Inhalation Move casualty to fresh air and keep at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention.

Eye Contact 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.

Skin Contact Flush contaminated skin with plenty of water. Remove contaminated clothing and shows. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion 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

Harmful if swallowed. Symptoms may include headache, nausea, vomiting.. May cause slight eye and skin irritation. Symptoms include: Redness, swelling, itching and dryness.

Note to Physician Consult a physician. Show this safety data sheet to the doctor in attendance.

Section 5 – Fire-Fighting Measures

Flash Point (°C)	Not Flammable
Flash Point Method	PMCC
Auto Ignition Temperature	347°C
Conditions of Flammability	Not flammable or combustible.
Extinguishing Media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable Extinguishing Media	Water jet.
Unusual Fire/ Explosion Hazard	No data available.
Hazardous Combustion Products	Carbon oxides.
Fire Fighting Equipment	Wear appropriate protective equipment and self-contained breathing apparatus with a full face-piece operated in positive pressure mode.
Special Precautions for Firefighters	No data available.

Section 6 – Accidental Release Measures

Personal precautions	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.
Environmental precautions	Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.
Methods and materials for containment and cleaning up	Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

Section 7 – Handling and Storage

Precautions for safe handling	Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.
Conditions for safe storage	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.
Incompatible Materials	Strong Acids, Strong Bases. Strong oxidizing agents.

Section 8 – Exposure Controls / Personal Protection

Occupational Exposure Limits

Ingredient Name	**Exposure Limits**
Triethylene Glycol	**ACGIH TLV** Ceiling: 50ppm, 127mg/m^3
Potassium hydroxide	**Canada, Alberta OHSC Code**

	None established
	ACGIH
	Ceiling: 2mg/m^3
Phosphoric acid, 75%, aqueous solution	**Canada, Alberta OHSC Code**
	1mg/m^3
	ACGIH
	TWA: 1mg/m^3
	STEL: 3mg/m^3
	OSHA PEL
	TWA 1mg/m^3
Ethylene Glycol	**Canada, Alberta OHSC Code**
	100mg/m^3
	ACGIH
	TLV: 100mg/m^3
Disodium tetraborate, pentahydrate	**Canada, Alberta OHSC Code**
	TWA: 1mg/m^3
	Ceiling: 3mg/m^3
	ACGIH
	TWA: 2mg/m^3
Sodium 4(or 5)-methyl-1H-benzotriazolide	**Canada, Alberta OHSC Code**
	None established
Sodium Nitrite	**Canada, Alberta OHSC Code**
	None established
	ACGIH
	None Established
	OSHA
	None Established
Corrosion Inhibitors and pH Buffers	**Canada, Alberta OHSC Code**
	None established
Polydimethylsiloxane	**Canada, Alberta OHSC Code**
	None established
Silica filled polydimethylsiloxane	**Canada, Alberta OHSC Code**
	None established
Sucrose distearate	**Canada, Alberta OHSC Code**
	TWA: 10mg/m^3 (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

Physical State	Liquid	**Water Solubility**	miscible
Appearance & Odour	Clear, colourless. Odourless.	**Boiling Point**	>100°C
Vapour Pressure	<1 mmHg (20.0°C) (TEG)	**Boiling Point Range**	Not applicable
Vapour Density	5.18(Air = 1) (TEG)	**Melting Point**	-35°C
Specific Gravity	1.07-1.09	**Freezing Point**	-35°C
Partition coefficient (n-octonal/water)	Not available.	**Lower Explosive Limit (LEL)**	0.9% (TEG)
pH	8.5 – 9.5 Neat	**Upper Explosive Limit (UEL)**	9.2% (TEG)
Flashpoint (Method)	Not Flammable.	**Auto Ignition temperature**	347°C (TEG)
Odour Threshold	Not available.	**Evaporation Rate**	Not available.
Flammability (Solid, Gas)	Not available.		
Decomposition Temperature	Not available.	**Viscosity**	Not available.

Section 10 – Stability and Reactivity

Reactivity	No specific test data related to reactivity available for this product.
Chemical stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	No data available.
Conditions to avoid	No data available.
Materials to avoid	Strong acids. Strong oxidizing agents. Strong bases
Hazardous decomposition products	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	Harmful if absorbed through the skin. May cause skin irritation.
Eye contact	May cause eye irritation.
Ingestion	May cause abdominal discomfort or pain, nausea, vomiting
Acute and Chronic Toxicity	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
Disodium tetraborate, pentahydrate	LD50 Oral	Rat	>2000mg/kg
	LD50 Dermal	Rabbit	>2000mg/kg
Sodium 4(or 5)-methyl-1H-	LD50 Oral	Rat	640 – 1980mg/kg
	LD50 Dermal	Rabbit	>2000mg/kg

benzotriazolide			
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 28.6mgL	Fish – Pisces	96 Hr
Phosphoric acid, 75%, aqueous solution	LC50 138mgL	Fish – Pisces	96 Hr
	LC50 18500mg/L	Fish – Oncorhynchus mykiss	96 Hr
Ethylene Glycol	LC50 >1000mg/L	Fish – Leuciscus idus	48 Hr
	EC50 74000mg/L	Daphnia – Daphnia magna	24 Hr

Disodium tetraborate, pentahydrate	LC50 100 – 1000mg/L EC50 340mg/L	Fish – Pisces Daphnia – Dapnhia magna	96 Hr 24 Hr
Sodium 4(or 5)-methyl-1H-benzotriazolide	LC 50 25mgL EC 50 280mg/L	Fish – Oncorhynchus mykiss Daphnia – Daphnia magna	96 Hr 24 Hr
Sodium Nitrite	LC50 0.19mgL	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		

Persistence and degradability >70% - readily biodegradable
Bioaccumulative potential No bioaccumulation is to be expected (log Pow ≤4)
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)
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.

Section 16 – Other Information

REVISION SUMMARY:

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SDS Prepared by: CFR Lab Manager

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