



Safety Data Sheet - GHS

Triethylene Glycol 90%

Date of Revision: June 19, 2019

Section 1 - Chemical Product and Company Identification

| | |
|-----------------------------------|--|
| Product Name | Triethylene Glycol 90% |
| Synonyms | TEG 90, 2,2'-(ethylenedioxy)diethanol; TEG; 2,2'-[1,2-ethanediylbis(oxy)]bisethanol; Triglycol |
| 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, | Hazardous Ingredient, Synonyms | PERCENT | CAS |
|-----------------------|--------------------------------|---------|-----|
|-----------------------|--------------------------------|---------|-----|

| Common Name | | 90% | NUMBER |
|-------------------------|---|-----|---------------|
| Triethylene Glycol | TEG, 2,2'-(ethylenedioxy)diethanol; TEG; 2,2'-[1,2-ethanediylbis(oxy)]bisethanol; Triglycol | 90% | 112-27-6 |
| Water | H ₂ O, Aqua | 10% | 7732-18-5 |
| Chemical Formula | Not Applicable | | |

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

Section 4 - First Aid Measures

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| 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 shoes. 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

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|---|---|
| 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

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| 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

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|--------------------------------------|---|
| 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 |

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 | -21°C |
| Specific Gravity | 1.10 – 1.12 | Freezing Point | -21°C |
| Partition coefficient (n-octonal/water) | Not available. | Lower Explosive Limit (LEL) | 0.9% (TEG) |
| pH | Not available. | 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. | Viscosity | Not available. |
| Decomposition Temperature | Not available. | | |

Section 10 – Stability and Reactivity

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|---|---|
| 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

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|-----------------------------------|--|
| 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 | Exposure |
|-------------------------|-------------|---------|------------|----------|
| Triethylene Glycol | LD50 Oral | Rat | 17000mg/kg | - |
| | LD50 Dermal | Rabbit | 22500mg/kg | - |

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 |

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



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

SDS Prepared by: CFR Lab Manager

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