



MATERIAL SAFETY DATA SHEET

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SECTION 1 – CHEMICAL IDENTIFICATION

Trade Name:	Chloroglycerine	Date of Issue:	December 6, 1986
Synonyms:	CG; 3-Chloro-1,2-propanediol; 1,2-Propanediol, 3-chloro-; Glycerol alpha-monochlorohydrin	Revised Date:	May 2, 2006
Formula:	C ₃ H ₇ ClO ₂		
Chemical Family:	Alcohol, Alkyl Halide		
Chemical Use:	Chemical intermediate.		
Telephone Number:	Information		(281) 474-3271
Emergency Number:	Chemtrec		(800) 424-9300 Domestic (703) 527-3887 International

HMIS Hazard Rating

Health:	3*	4 = Extreme
Fire:	1	3 = High
Reactivity:	1	2 = Moderate
*-Chronic effect indicator. See Section 11.		1 = Slight
PPE rating to be supplied by user depending on use conditions.		0 = Least

SECTION 2 – HAZARDS IDENTIFICATION

Inhalation: Will cause irritation and central nervous system depression.

Skin Contact: May cause delayed blistering and burns. Harmful amounts may be absorbed through the skin.

Eye Contact: Will cause severe irritation. Repeated or prolonged exposure may cause conjunctivitis.

Ingestion: May cause delayed blistering and burns. May be harmful or fatal if swallowed. Ingestion may cause paralysis. Chronic ingestion may cause sterility.

SECTION 3 – COMPOSITION

<u>Components</u>	<u>Percentage</u>	<u>TLV / PEL (ppm)</u>	<u>CAS #</u>
3-Chloro-1,2-propanediol	>98	Not Established	96-24-2

SECTION 4 – FIRST AID MEASURES

- Inhalation: Remove victim to fresh air. If breathing is difficult, give oxygen. If not breathing, administer artificial respiration. Get medical attention.
- Skin Contact: Immediately remove contaminated clothing and shoes. Wipe excess material from skin and flush with water for at least 15 minutes. Use soap if available or follow by washing with soap and water. Do not reuse contaminated clothing without laundering. Dispose of all contaminated leather articles such as gloves and shoes. Get medical attention.
- Eye Contact: Immediately flush with plenty of water for at least 15 minutes. Get medical attention.
- Ingestion: Get medical attention immediately.

SECTION 5 – FIREFIGHTING MEASURES

- Extinguishing Media: Use water, foam, or dry chemical.
- Special Firefighting Procedures/Precautions: Firefighters should wear NIOSH approved self-contained breathing apparatus. Responders should wear protective clothing to prevent skin contact. Move containers from fire area. If unable to move, cool sealed containers with water.
- Unusual Fire and Explosion Information: Emits toxic fumes of hydrochloric acid when burning. Containers may explode when heated.
- Environmental Note: Prevent entry into waterways. May be hazardous to aquatic life.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Protective Measures: Evacuate area of unprotected personnel. Eliminate sources of ignition. Stay upwind and out of low areas. Wear personal protective equipment (See section 8) when responding to spills.

Spill Management: Stop source of leak if safe to do so. Dike and contain spill. Use water spray (fog) to reduce vapors. If vapor cloud forms, blanket area with water fog and foam. Use vacuum truck or pump to storage/salvage vessels. Clean up residue with an absorbent such as clay, sand or other suitable material and dispose of properly. Spray area with water to remove trace residue. Contain runoff from residue flush and dispose of properly. Prevent entry into waterways, sewer, or confined areas. Remove contaminated trace residues from soil and dispose of in same manner as material. For small spills, clean up residue with an absorbent such as clay, sand or other suitable material. Place in non-leaking container and dispose of material properly.

Disposal: Proper disposal should be evaluated based on regulatory status of this material (refer to section 13).

SECTION 7 – HANDLING AND STORAGE

Containers do not have to be grounded and bonded when material is transferred, but is recommended as a good practice. Store in a cool, dry place. Keep away from heat, sparks, and flames.

SECTION 8 – EXPOSURE CONTROLS AND PERSONAL PROTECTION

Respiratory Protection:	NIOSH approved respiratory protection for organic vapors.
Ventilation:	Utilize local exhaust to control high vapor connections in confined areas.
Protective Gloves:	Utilize appropriate impervious chemical gloves.
Eye Protection:	Chemical goggles and possibly a face shield. Have eyewash facilities readily available.
Other Protective Equipment:	Wear additional protective clothing to prevent skin contact. This may include chemical resistant boots and chemical resistant suits.
Work Practices:	Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet facilities. Promptly remove soiled clothing and wash thoroughly before reuse. Shower after work using plenty of soap and water.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point:	239°F (115°C) at 10 mm Hg, 415 °F (213°C) at 760 mm Hg
Melting Point:	Not Established
Molecular Weight:	110.48
Volatility/Vol (%):	Not Established
Vapor Pressure (mm Hg):	<1 at 77°F (25°C)
Vapor Density (Air = 1):	3.816
Solubility in H ₂ O:	Soluble.
Appearance/Odor:	Clear to straw colored liquid / Slight odor.
Odor Threshold:	Not Established
pH:	Not Established
Viscosity (cps)	Not Established
Specific Gravity (H ₂ O = 1):	1.31 – 1.325 at 77°F (25°C)
Evap. Rate (Butyl Acetate = 1):	Not Established
Flash Point:	270°F (132°C) PMCC, ASTM D93
Lower Explosive Limit:	Not Established
Upper Explosive Limit:	Not Established
Autoignition Temperature:	Not Established

SECTION 10 – STABILITY AND REACTIVITY

Chemical Stability:	Stable.
Conditions to Avoid:	Do not store adjacent to caustic compounds.
Incompatible Materials:	Oxidizers, carbon steel, bases.
Decomposition Products:	Oxides of carbon and hydrochloric acid.
Hazardous Polymerization:	Will not occur.

SECTION 11 – TOXICOLOGICAL INFORMATION

Chloroglycerine has exhibited experimental reproductive effects in studies conducted with rats and monkeys and has shown evidence of carcinogenicity in an experimental study with rats. Chloroglycerine is a chemosterilant for rodents.

Carcinogenicity listed by: NTP: No IARC: No OSHA: No

ACGIH TLV: Not Established **STEL:** Not Established
OSHA PEL: Not Established **STEL:** Not Established

Inhalation: LCLo: 125 ppm/4H (rat)
Skin: LD50: 1057 mg/kg (rat)
Eyes: 100 mg SEV (rabbit)
Ingestion: LD50: 26 mg/kg (rat)
 LD50: 160 mg/kg (mouse)
Intraperitoneal: LDLo: 10 mg/kg (rat)
 LD50: 73 mg/kg (mouse)

SECTION 12 – ECOLOGICAL INFORMATION

No data available.

SECTION 13 – DISPOSAL INFORMATION

Place in a city, state, or federally permitted disposal facility. Handle in accordance with all applicable regulations.

SECTION 14 – TRANSPORTATION INFORMATION**US DOT:**

Proper Shipping Name:	Glycerol alpha-monochlorohydrin
Primary Hazard Class:	6.1
Secondary Hazard Class:	Not Applicable.
Identification Number:	UN 2689
Packing Group:	III
Reportable Quantity:	Not Applicable.
Marine Pollutant:	Not Applicable.
Label(s) Required:	TOXIC.

SECTION 15 – REGULATORY INFORMATION**U.S. Regulations:**

TSCA: All substances are listed on, or are exempt from reporting.
 TSCA 12(b) Export Notification: Not Listed

California Proposition 65: Not Listed

SARA Hazard Notification:

Hazard Categories Under Title III:	Acute, Chronic.
Section 302 Extremely Hazardous Substances:	Not Listed
Section 313 Toxic Chemicals:	Not Listed
CERCLA RQ:	Not Listed

European Regulations:

EINECS Number: 202-492-4

Labeling according to EC directives.

Symbol: T
Toxic



R-Phrases: R60	May impair fertility.
R21	Harmful in contact with skin.
R23/25	Toxic by inhalation and if swallowed.
R41	Risk of serious damage to eyes

S-Phrases: S53	Avoid exposure - obtain special instruction before use.
S26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S36	Wear suitable protective clothing.
S39	Wear eye/face protection.
S45	In case of accident or if you feel unwell, seek medical advice immediately (show label where possible).

Canadian Regulations:

Chloroglycerine is listed on the NDSL.

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

Japanese Regulations:

ENCS Number: 2-2441

Australian Regulations:

Chloroglycerine is listed on the AICS.

Korean Regulations:

ECL Number: KE-05872

Philippines Regulations:

Chloroglycerine is listed on the PICCS.

SWISS Regulations:

Chloroglycerine is listed on the Giftliste 1
(List of Toxic Substances 1),
Toxic Category 2.

SECTION 16 – OTHER INFORMATION

PPE Codes (NPCA-HMIS)

A – Glasses	G – Glasses, Gloves, Vapor Respirator
B – Glasses, Gloves	H – Goggles, Gloves, Apron, Vapor Respirator
C – Glasses, Gloves, Apron	I – Glasses, Gloves, Dust/Vapor Respirator
D – Faceshield, Gloves, Apron	J – Goggles, Gloves, Apron, Dust/Vapor Respirator
E – Glasses, Gloves, Dustmask	K – Supplied Air, Gloves, Full Protective Suit, Boots
F – Glasses, Gloves, Apron, Dust Respirator	

Disclaimer

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