Houghton Chemical Corporation

Safety Data Sheet

CryptoCool®

Section 1 - Identification	
Product Name	CryptoCool®
Manufacturer Address	Houghton Chemical Corporation 52 Cambridge Street, Allston, MA 02134 1-617-254-1010 or 1-800-777-2466
Emergency Telephone	**CHEMTREC: 1-800-424-9300**
Chemical Name & Synonyms	Inhibited Ethylene Glycol
Chemical Family	Ethylene Glycol Mixture
Recommended Use	Heat Transfer Fluid
Restrictions on Use	Dilution to 60% or below is generally recommended: dilute with deionized or distilled water to meet local condition.
Section 2 – Hazard(s) Identification	
Hazard Classification	Acute Toxicity, Oral, Category 4 Specific Target Organ Toxicity (Repeated Exposure), Category 2
Signal Word	Warning
Hazard Statement	Harmful if swallowed. May cause damage to kidneys through prolonged or repeated exposure if swallowed.
Pictogram Description	Health Hazard, Exclamation Point
Precautionary Statement	Prevention: Wash hands and any other contaminated skin after handling. Do not eat, drink or smoke when using this product. Wear protective gloves (chemically impervious). Do not breathe mist, vapors or spray. Response: If swallowed: Call a poison control center or doctor if you feel unwell. Rinse mouth. If on skin: Wash with plenty of water. Get medical attention if you feel unwell. Storage: Store securely closed in a cool, dry, well-ventilated place. Disposal: Contact local sewer, municipal, state and/or federal agencies to determine appropriate disposal options for the product. Dispose of this container with a registered reconditioner or as otherwise appropriate.
Any other Hazard not otherwise classified	Not Applicable

Section 3 – Composition and Information on Ingredients			
Chemical Name	Common name and synonyms	CAS #	% by weight
Ethylene Glycol	Monoethylene Glycol	107-21-1	96%
Water	N/A	7732-18-5	2%
Inhibitors & Dye	N/A	Proprietary	2%
The chemical identity and specific concentration of ingredient(s) marked "Proprietary" are withheld as a trade secret.			

Section 4 – First aid Measures	
Symptoms of Exposure	
Acute	Irritation of affected area with symptoms of reddening, itching, swelling, burning, possible permanent damage, nausea, vomiting, weakness, and death
Delayed	Irritation of affected area with symptoms of reddening, itching, swelling, burning, possible permanent damage, nausea, vomiting, weakness, abdominal pain, muscle tenderness, respiratory depression, metabolic acidosis, hypocalcemic tetany and death
Inhalation	Vapors and mists cause respiratory irritation and may be harmful if inhaled.
Skin	Irritation may result.

Eye Contact	Irritation may cause transitory stinging and tearing.
Ingestion	Toxic: may be harmful or fatal if swallowed.
First Aid Instructions	
Inhalation	Remove to fresh air. Administer oxygen if breathing is difficult. Give artificial respiration if victim is not breathing. Seek medical attention.
Skin	Wash skin with soap and water for at least 20 minutes. Remove any contaminated clothing. Seek medical attention immediately if you feel unwell or irritation persists.
Eye Contact	Flush with water for at least 20 minutes. Seek medical attention if irritation develops or persists.
Ingestion	DO NOT induce vomiting, seek medical attention immediately. If swallowed give 2 to 3 glasses of water if victim is conscious and alert. Do not give anything by mouth to an unconscious person. To prevent aspiration of swallowed product, lay victim on side with head lower than waist. Vomiting may occur spontaneously. If vomiting occurs and the victim is conscious, give water to victim to further dilute the chemical.
Other	Consult a physician. Show safety data sheet to the doctor in attendance.

Section 5 – Fire Fighting Measures

Suitable Extinguishing Material	**Water, water fog, water spray, alcohol-resistant foam, dry chemical, sand, or carbon dioxide.**
Unsuitable Extinguishing Material	No Data Available
Hazards from Combustion	Smoke may contain the original material in addition to but not limited to: Carbon Monoxide, Carbon Dioxide.
Special Protective Equipment for Firefighters	Wear self-contained breathing apparatus and protective suit. Evacuate personnel to safe areas and keep upwind of fire.

Section 6 – Accidental Release Measures

Personal precautions and emergency procedures	Ventilate area of leak or spill. Remove all sources of ignition. Wear appropriate personal protective equipment.
Protective equipment to prevent the contamination of skin, eyes, and clothing.	Usage of safety glasses or goggles is recommended. Chemical resistant gloves, chemical resistant apron, boots, and full suit will be necessary depending on the extent of clean up task. If ventilation does not control airborne concentration then respiratory protection equipment that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements should be used.
Methods and materials used for containment	Collect liquid in an appropriate container or absorb with inert material and place in chemical waste container.
Cleanup procedures	Do not flush to sewer. Comply with all federal, state, and local regulations.

Section 7 – Handling and Storage

Precautions for safe handling	Protect container from physical damage. Wear appropriate personal protection equipment. Do not expose containers to open flame, excessive heat, or direct sunlight. Use local exhaust over processing area. Do not eat, drink or smoke around products.
Recommendations on the conditions for safe storage, Storage/handling incompatibilities.	Store in a cool, dry and well ventilated area away from sources of heat, moisture and incompatible materials. Observe all warnings and precautions listed for the product. Keep container closed to prevent contamination.

Section 8 – Exposure Controls/Personal Protection

OSHA Permissible Exposure Limits (PELs)	Not Applicable
American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values	Ethylene Glycol ACGIH TLV-TWA: 25 ppm (vapor); ACGIH TLV-STEL: 50 ppm (vapor) / 10 mg/m^3 (aerosol particulate)
Other Exposure Limits	Ethylene Glycol CAL/OSHA PEL: 40 ppm (100 mg/m^3) (vapor)
Engineering Control	Use mechanical (general) ventilation to control airborne levels below exposure guidelines.
Individual Protection Measures	Wear protective safety glasses or goggles, gloves, apron. If ventilation is insufficient to control airborne levels below exposure guidelines, wear vapor respirator.

Section 9 – Physical and Chemical Properties

Appearance (physical state, color, etc.)	Liquid, Clear, Fluorescent yellow
Odor	Slight to no odor

Odor threshold	No data available
pH	9.0 - 10.5
Freezing point (as 50%)	-34°F / -37°C
Initial boiling point and boiling range	385°F / 196°C
Flammability (solid, gas)	This material is Not Flammable but can burn if ignited.
Upper/lower flammability or explosive limits	Not Explosive; LOWER: 3.2% (v) UPPER: 15.3% (v)
Flash point	232°F / 111°C
Auto-ignition temperature	> 700°F / > 370°C
Decomposition temperature	Not Applicable
Viscosity	~14 mm²/s at 60°F
Relative density	1.120 - 1.135
Solubility	Miscible in water
Partition coefficient: n-octanol/water	Log Pow: -1.36
Vapor pressure	134 Pa / 0.1 mmHg
Evaporation rate (Butyl Acetate = 1)	<1
Vapor density (air = 1)	2.14

Section 10 – Stability and Reactivity

Reactivity	Product is stable under typical use temperatures.
Chemical Stability	Product is stable under typical use temperatures.
Hazardous Reactions	Avoid contact with oxidizing materials, strong bases and strong acids.
Conditions to Avoid	Heat, flames, ignition sources and incompatibles.
Incompatible Materials	Avoid contact with oxidizing agents, strong bases and strong acids.
Decomposition Products	Carbon dioxide and carbon monoxide may form when heated to decomposition.

Section 11 – Toxicological Information

Likely Routes of Exposure	Eyes / Skin / Ingestion / Inhalation

	Effects from Short Term Exposure	Effects from Long Term Exposure
Delayed Effects	Irritation of affected area	Irritation of affected area
Immediate Effects	Irritation of affected area	Irritation of affected area
Chronic Effects	Not Applicable	Damage to kidneys, teratogenic effects
The numerical measures of toxicity (e.g., acute toxicity estimates such as the LD50 (median lethal dose) - the estimated amount [of a substance] expected to kill 50% of test animals in a single dose).		Skin: LD50 - Rabbits - >10600 mg/kg Ingestion: LD50 - Rats - 7712 mg/kg Lethal Dose Human Adult - 1000-2000 mg/kg (approx. 100 mL)
Description of the symptoms. This description includes the symptoms associated with exposure to the chemical including symptoms from the lowest to the most severe exposure.		Irritation, nausea, vomiting, abdominal pain, weakness, muscle tenderness, respiratory depression, convulsions, cardiovascular collapse, pulmonary edema, hypocalcemic tetany, metabolic acidosis, death.

Listed in the National Toxicology Program (NTP) Report on Carcinogens?	No	**Found to be a potential carcinogen in the International Agency for Research on Cancer (IARC) Monographs?**	No	**Found to be a potential carcinogen by OSHA?**	No

Section 12 – Ecological Information

Ecotoxicity	Low Ecotoxicity. Ethylene glycol: LC50 - Pimephales promelas (fathead minnow) - 4 d, >10000 mg/L LC50 - Daphnia magna (water flea) - 2 d, 51000 mg/L EC50 (population change) - Lemna gibba (inflated duckweed) - 7 d, 8950 mg/L
Persistence and Degradability	Biodegradable in soil, readily biodegradable in water.
Bioaccumulation	Does not bioaccumulate significantly (log Pow < 0)
Mobility in Soil	Dissolves in water. If product enters soil, it will be highly mobile and may contaminate ground water
Other Adverse Effects	No Data Available

Section 13 – Disposal Considerations	
Do not dump into sewers, on ground or into any bodies of water. Contact local sewer, municipal, state and/or federal agencies to determine appropriate disposal options.	
Section 14 – Transport Information	
Is product DOT regulated in Non-Bulk packaging?	No
DOT BULK	
UN number	UN3082
UN proper shipping name	Environmentally hazardous substances, liquid, n.o.s. (Ethylene glycol)
Transport hazard class(es)	9
Packing group number	III
Environmental hazards (e.g., identify if it is a marine pollutant according to the International Maritime Dangerous Goods Code (IMDG Code))	Not Regulated
Guidance on transport in bulk (according to Annex II of MARPOL 73/783 and the International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (International Bulk Chemical Code (IBC Code))	Not Regulated
Any special precautions which an employee should be aware of or needs to comply with, in connection with transport or conveyance either within or outside their premises	Reportable Quantity (RQ): 5000 lbs Ethylene Glycol

Section 15 – Regulatory Information (Not indicated anywhere else on this SDS)		
Safety Regulations	OSHA Hazard Communication Standard: This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.	
Health Regulations	Not Available	
Environmental Regulations	Not Available	
SARA 311/312	Based upon available information, this material is classified as the following health and/or physical hazards according to Section 311 & 312	Superfund Amendments and Reauthorization Act of 1986 Title III (SARA) Sections 311 and 312: Immediate (Acute) Health Hazard - Yes; Delayed (Chronic) Health Hazard - Yes; Fire Hazard - No; Reactive Hazard - No; Sudden Release of Pressure Hazard - No. Section 313: Product contains the following substances which are subject to reporting requirements and are listed in 40 CFR 372 - Component: Ethylene Glycol CAS#: 107-21-1 Amount: >=96.0%.
HMIS	Blue/Health	2
	Red/Flammability	1
	Orange/Physical Hazard	0
	White/Personal Protection	x
NFPA 0 (no hazard) to 4 (severe risk)	Health (Blue)	2
	Flammability (Red)	1
	Instability/Reactivity (Yellow)	0
	Special (White)	N/A
US Toxic Substance Control Act	Components of this product listed in the January 2025 TSCA Inventory update are designated as ACTIVE or are exempt from Inventory requirements under 40 CFR 720.30	
CA Proposition 65	WARNING: This product can expose you to chemicals including Ethylene glycol, which is/are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov	
CEPA – Domestic Substances List (DSL)	All substances contained in this product are listed on the Canadian Domestic Substances List (DSL) or are not required to be listed.	

Section 16 – Other Information

This SDS is applicable for all dilutions, colors, and containers for this brand of product. The information herein is provided in good faith and believed to be accurate as of the effective revision date shown. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/ user's responsibility to ensure that activities comply with all federal, state, provincial or local law.

Product Dilutions Differentials

Properties[1]	60%	50%	40%	35%	30%	25%
CryptoCool®	60%	50%	40%	35%	30%	25%
(Deionized) Water	40%	50%	60%	65%	70%	75%
Specific Gravity (15/15°C 60/60°F)	1.085 - 1.100	1.066 - 1.092	1.055 - 1.070	1.050 - 1.065	1.045 - 1.057	1.035 - 1.050
Reserve Alkalinity (minimum)	6	5	4	4	3	3
Freeze Point (maximum)	-63°F / -53°C	-34°F / -37°C	-10°F / -23°C	-4°F / -18°C	+4°F / -15°C	+10°F / -12°C

[1]Data for the concentrate is based on volume of Ethylene Glycol; data for mixtures is based on volume of CryptoCool®.

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