

MATERIAL SAFETY DATA SHEET
PRODUCT: ThermoGuard®™ Pre-Charged Antifreeze
ANTIFREEZE/COOLANT

Revision Date: 04/14/2011

1.SUPPLIER

**Marcus Products
2954 State Hwy KK
Rogersville, MO 65742**

EMERGENCY PHONE: 1-800-424-9300 (CHEMTREC)

2. INGREDIENTS INFORMATION

Material	CAS#	PEL (OSHA)	TLV(ACGIH)	Percentage
Ethylene Glycol	107-21-1	50 ppm	50 ppm	83-93
Diethylene Glycol	111-46-6	None	None	<5
Corrosion Inhibitor				<10
Water				<4

3. HAZARDS IDENTIFICATION

Emergency Overview

Slight Odor. May be fatal if swallowed. Vapors can cause eye irritation.

LOWEST KNOWN LD50 (ORAL) Mg/kg (Rats)	107-21-1	5840
LOWEST KNOWN LD50 (SKIN) Mg/kg (Rabbits)	107-21-1	9530

HAZARD RATING SYSTEM

NFPA: HEALTH 1	FLAMMABILITY: 1	REACTIVITY: 0
HMIS: HEALTH 2	FLAMMABILITY: 1	REACTIVITY: 0

KEY: 0-Minimal 1-Slight 2-Moderate 3-Serious 4-Severe

4. PHYSICAL/CHEMICAL CHARACTERISTICS

pH (50% water solution)	8.6
Point	-15° C (5° F)
Specific Gravity (Water=1)	1.12
Vapor Pressure (mm of Hg 20/C)	<0.1
Boiling Point	176° C (349° F)
Vapor Density (Air=1)	NE
Evaporation Rate (BuAc=1)	Nil
Water Solubility	Complete
Appearance	Green
Odor	Mild

5. FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method): >200oF
Extinguishing Media: water Fog, Alcohol Foam, Carbon Dioxide and Dry Chemical.
Do not use a direct spray of water

Fire Fighting Procedures: Get people out of the area. Do not enter the fire area without full bunker equipment including NIOSH approved pressure supplied masks.

Unusual Fire Hazards: Containers may explode from internal pressure if confined to fire. Cool with water. Keep unnecessary people away.

6. REACTIVITY DATA

Chemical Stability: Stable
Incompatible materials: Oxidizing agents, reducing agents and strong acids
Decomposition Products: From fire – oxides of carbon and nitrogen
Hazardous polymerization: Will not occur

7. HEALTH HAZARD DATA

Routes of Entry
Inhalation – Primary
Skin/Eyes – Primary
Ingestion – Not likely to occur

Health Hazards
Acute: Prolonged exposure can be destructive to tissue especially eye tissue. Inhalation of vapors or mist may cause mucous membrane irritation. Ingestion can result in central nervous system depression, kidney injury and destruction of tissue, all of which could be fatal.

Chronic: Over exposure to vapors are associated with injuries to kidneys, liver, lungs, blood and central nervous system. Skin absorption can induce central nervous system depression and kidney and liver injury. Repeated ingestion can cause brain damage and destruction of tissue. Ethylene Glycol had caused birth defects or deaths in laboratory studies using pregnant mice and rats.

CARCINOGENICITY:

Listed in NTP? No
IARC Monographs? No
Regulated? No
OSHA

Signs & Symptoms of Exposure

Inhalation: Drunkenness, nausea, vomiting, visual impairment, rapid breathing, increased heart rate and decreased urine volume.
Eyes: Irritation/Tissue destruction develops immediately upon contact.

Medical conditions generally aggravated by exposure are breathing disorders, dermatitis and eye, kidney, liver disorders.

First Aid Procedures:

Eye Contact:	Flush with water for 15 minutes
Skin Contact:	wash skin with soap and water. Get medical attention if symptoms develop and persist
Ingestion:	Do not induce vomiting. Drink large amounts of water to dilute material in stomach. Follow with milk. Never give fluids if the victim is unconscious or having convulsions. GET MEDICAL ATTENTION IMMEDIATELY. Material can be fatal.
Inhalation:	Remove victim to fresh air and if needed immediately begin artificial respiration. Give oxygen if breathing is labored. Get emergency Medical help. Contact Physician immediately.

8. SPILL OR LEAK PROCEDURE.

For Spill:	In case of spillage absorb with inert material and dispose of in accordance with applicable regulations.
For Waste Disposal:	EPA approved hazardous waste disposal site.

9. PRECAUTIONS FOR SAFE HANDLING AND USE:

Respiratory Protection:	NIOSH approved organic vapor mask required in closed areas
Ventilation:	Required in closed areas
Protective Gloves:	NIOSH Chemical resistant gloves suitable for Ethylene Glycol
Other Protective Equipment:	Chemical apron is recommended if there is a likelihood of splashing of liquid onto the body.

9.. TRANSPORTATION INFORMATION:

Hazard Class:	Not regulated
DOT Shipping Name:	Ethylene Glycol Antifreeze
UN/NA Number:	None
Reportable Quantity:	None

10. OTHER DATA

EPA hazard categories:	Acute, chronic
Cercla RQ:	1 Pound based on Ethylene Glycol
SARA TITLE III:	RQ – None; TPQ – None
SARA TITLE III, Section 313:	Component – Ethylene Glycol.
CAS – 107-21-1% 94-98%	

Footnotes:	N/A – Not Applicable	N/D – No Data
	App. – Approximate	EST. – Estimated
	< - Less Than	> - Greater Than