

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: **John Deere Cool-Gard Pre-Dilute**

Product description: Pre-Mixed Ethylene Glycol Antifreeze/Coolant

MANUFACTURER:

Northland Products Company
1000 Rainbow Drive
Waterloo, IA 50704
319-234-5585, 1-800-772-1724

EMERGENCY TELEPHONE NUMBERS:

Chemtrec: 1-800-424-9300

2. COMPOSITION/INFORMATION ON INGREDIENTS

| | <u>wt. Percent</u> | <u>CAS Registry #</u> |
|------------------------------------|--------------------|-----------------------|
| Monoethylene Glycol | > 45 | 000107-21-1 |
| Diethylene Glycol | 5 max | 000111-46-6 |
| Sodium Tetraborate Pentahydrate | 0.1-1.0 | 001303-96-4 |
| Proprietary Inhibitors | 1-5 | Mixture |
| Water | 50 max | 007732-18-5 |

3. HAZARD IDENTIFICATION

Emergency Overview:

Liquid, generally dyed green with a mild odor. Excessive exposure may cause irritation to the upper respiratory tract. Ingestion of very large amounts of Ethylene Glycol may cause birth defects. Exposure through inhalation and skin contact did not cause birth defects in animal reproduction. In-vitro (test tube) and animal mutagenicity tests have been negative. Exposure should be minimized.

POTENTIAL HEALTH EFFECTS:

INHALATION:

Vapors are minimal under normal conditions but should be avoided, concentrations may reach levels that could cause irritation.

EYE CONTACT:

May cause slight temporary eye irritation. Corneal injury is unlikely. Vapors or mists may irritate eyes.

SKIN CONTACT:

Potentially irritating to the skin (irritant, Sensitizer).

INGESTION:

Excessive exposure may cause central nervous system effects, cardiopulmonary effects, and kidney failure. Single dose oral toxicity is moderate. Single dose oral LD50(Rat) Accute=4700ppm, (Hamster) Accute=12565ppm. Amounts ingested incidental to normal handling are not likely to cause injury; however ingestion to larger amounts could cause serious injury, even death.

3. HAZARD IDENTIFICATION (Continued)

OTHER:

Excessive exposure may cause irritation to upper respiratory tract. Observations in long term high dose animal studies with ethylene glycol and diethylene glycol include bladder stones, kidney and liver effects and deposition of calcium salts in various tissues. Ethylene glycol did not cause cancer in long term animal studies. Based on animal studies, ingestion of very large amounts of ethylene glycol appears to be the only way to produce birth defects. Birth defects are unlikely from exposure to diethylene glycol. Results of in-vitro mutagenicity tests have been negative. Results of mutagenicity tests in animals have also been negative.

Hazardous Material Identification System (HMIS):

Health-1, Flammability-0, Reactivity-0 (Based on components)

4. FIRST AID MEASURES

INHALATION:

Remove the victim from the area to fresh air. Call a physician. Give oxygen if victim is breathing hard.

EYE CONTACT:

Flush eyes with large amounts of water immediately for 15 minutes or until irritation subsides. If irritation persists, get medical attention.

SKIN CONTACT:

Wash affected areas thoroughly with soap and water. Remove contaminated clothing and wash them before wearing again. Call a physician if irritation persists.

INGESTION:

If swallowed, IMMEDIATELY contact a poison control center, emergency treatment center or a physician. Never give anything by mouth to an unconscious person.

NOTE TO DOCTOR:

Supportive care. Treatment based on judgement of the physician in response to reactions of the patient. In treatment of intoxication, the use of ethanol, hemodialysis and intravenous fluids to control acidosis should be considered.

5. FIRE FIGHTING MEASURES

Flash point : Not Applicable
Flammable limits : Not Applicable
Autoignition Temperature : Not Applicable

5. FIRE FIGHTING MEASURES (Continued)

GENERAL HAZARD:

No hazards under normal conditions; however, engine components can be at temperatures above the flash, fire and autoignition point. Avoid spills in the engine compartment.

FIRE FIGHTING INSTRUCTIONS:

Either allow fire to burn out under controlled conditions or extinguish with foam, CO₂, or dry chemical. Try to cover liquid spills with foam. Shut off fuel to fire if possible to do so without hazard.

FIRE FIGHTING EQUIPMENT:

NIOSH approved self-contained breathing apparatus and eye protection are required for fire fighting personnel on all indoor fires and any significant outdoor fires.

HAZARDOUS COMBUSTION PRODUCTS:

Smoke, fumes, carbon monoxide, carbon dioxide and water.

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

Health-1, Flammability-0, Reactivity-0 (Based on components)

6. ACCIDENTAL RELEASE MEASURES

Notify the appropriate authorities immediately. Take all actions necessary to prevent adverse effects of the spill. Eliminate ignition sources. Shut off leak if safe to do so. Dike spilled liquid with sand/earth and dispose of properly. DO NOT use sawdust or other combustible materials.~ Prevent product from entering sewers or waterways. National Response Center 1-800-424-8802

7. HANDLING AND STORAGE

STORAGE TEMPERATURE: Ambient STORAGE PRESSURE: Atmospheric
GENERAL:

Keep container closed. Loosen closure cautiously before opening. Store in well ventilated area away from incompatible materials. (See Section 10) Keep away from heat, sparks and flames. Empty container may still retain hazardous properties.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS:

Use mechanical ventilation to control vapor concentrations in confined spaces. General ventilation should be sufficient for most operations.

8. EXPOSURE CONTROL / PERSONAL PROTECTION *(Continued)*

PERSONAL PROTECTION:

Respirator:

Use an air supplied respirator when concentrations are over the exposure limits.

Protective Clothing:

For brief contact, no precautions are necessary. Wear nitrile/neoprene gloves, nitrile/neoprene boots, a chemical worker's suit and chemical splash goggles as appropriate.

9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---------------------|------------------------------|
| Boiling point | : 330°F approximately |
| Vapor pressure | : Very low (0.05mmHg @ 20°C) |
| Vapor density | : > 1 |
| Solubility in water | : Completely miscible |
| Specific gravity | : 1.11 - 1.14 @ 60°F |
| pH | : Basic: 9-11 |
| Odor | : Sweet |
| Appearance | : Generally dyed green |
| Physical state | : Liquid |

10. STABILITY AND REACTIVITY

GENERAL:

This product is stable under normal storage conditions.

INCOMPATIBLE MATERIALS AND CONDITIONS TO AVOID:

Oxidizing agents.

HAZARDOUS DECOMPOSITION:

None.

HAZARDOUS POLYMERIZATION:

Will not occur

11. TOXICOLOGICAL INFORMATION

No component of this product present at levels greater than 0.1 is identified as a carcinogen by NTP, IARC or OSHA.

Data on animal testing is provided in section 3 (other).

No data on humans; Exposure can cause Nausea, Headache & Vomiting.

12. ECOLOGICAL INFORMATION

No data is available.

13. DISPOSAL CONSIDERATIONS

Ensure disposal is in compliance with Federal-State-Local laws.
Do not landfill or dispose of in sink drains or sewers.

14. TRANSPORTATION INFORMATION

DOT (Department of Transportation):

Proper shipping name : Environmentally Hazardous Substance,
Liquid, n.o.s., (Contains Ethylene
Glycol), UN 3082, PG III
Hazard class : 9
Labeling : Warning! Harmful or fatal if
swallowed. Avoid excessive exposure.
Avoid breathing sprays or mists.

15. REGULATORY INFORMATION

TSCA (Toxic Substance Control Act):

All components of this product are listed on the U.S. TSCA
inventory.

CERCLA (Comprehensive Response Compensation, and Liability Act):

This product is not subject to any special reporting under the
requirements of CERCLA under 5000 pounds. We recommend you
contact local authorities to determine local reporting
requirements.

SARA TITLE III (Superfund Amendments and Reauthorization Act):

311/312 Hazard Categories:

This material is defined as hazardous by OSHA under
29 CFR part 1910.1200(d). Immediate health hazard and
delayed health hazard.

313 Reportable Ingredients:

Contains approximately 45 weight percent of Ethylene Glycol.

16. OTHER INFORMATION

THE INFORMATION PRESENTED HEREIN HAS BEEN COMPILED FROM SOURCES
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