# MATERIAL SAFETY DATA SHEET

## SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

**Product identifier** : **ES COMPLEAT COOLANT EG PREMIX (ETHYLENE GLYCOL BASED COOLANT)**

**Product Code(s)** : CC2825 (1 Gallon / 3.785 L Bottle of 50/50 Premix); CC2826 (55 gallon / 208 L Drum of 50/50 Premix); CC2827 (Bulk of 50/50 Premix); CC2848 (5 Gallon / 18.9 L Pail of 50/50 Premix); CC2834 (Tote tanks).

**Product Use** : Premixed antifreeze / coolant.

**Chemical Family** : Mixture.

**Supplier's name and address:**

**Cummins Filtration**
1200 Fleetguard Road
Cookeville, TN, U.S.A.
38506

**Manufacturer's name and address:**
Refer to Supplier

Information Telephone No. : (931) 526-9551 (Hours of operation: 24 Hours per day, 7 days per week)

**24 Hr. Emergency Tel #** : Chemtrec (800) 424-9300 (Within Continental U.S.); Chemtrec (703) 527-3887 (Outside U.S.).

## SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

| Ingredients | CAS # | % (weight) | ACGIH TLV | | OSHA PEL | |
|---|---|---|---|---|---|---|
| | | | TWA | STEL | PEL | STEL |
| Diethylene glycol | 111-46-6 | 1.0 - 4.0 | 10 mg/m3 | N/Av | N/Av | N/Av |
| Ethylene glycol | 107-21-1 | 40.0 - 70.0 | 100 mg/m3 (ceiling) | N/Av | 50 ppm (125 mg/m3) (ceiling) | N/Av |

Note: The OSHA PEL listed above for Ethylene glycol is a final rule / vacated value. The ACGIH TLV listed above for Diethylene glycol is an AIHA WEEL.

## SECTION 3 - HAZARDS IDENTIFICATION

**EMERGENCY OVERVIEW**

Blue liquid. Little or no odour. Warning!Harmful or fatal if swallowed. Harmful if absorbed through the skin. May cause nausea, vomiting, headache and other central nervous system effects. Could also cause convulsions, coma, respiratory arrest and death. Can cause kidney damage. May cause liver effects. Possible birth defect hazard - contains material that may cause birth defects.

***POTENTIAL HEALTH EFFECTS***

**Target organs** : Skin, respiratory system, digestive system, central nervous system, liver, kidneys.

**Routes of exposure** : *Inhalation:* YES *Skin Absorption:* YES *Skin & Eyes:* YES *Ingestion:* YES

**Signs and symptoms of short-term (acute) exposure**

*Inhalation:* Toxic in particulate form by inhalation.May cause irritation to the nose, throat and upper respiratory tract. If mists are inhaled, may cause tearing, general anesthesia, headache, coughing, respiratory stimulation, nausea, vomiting, pulmonary, kidney and liver damage.

*Skin:* Direct contact may cause mild skin irritation. Product may be absorbed and cause symptoms similar to those listed for ingestion.

*Eyes:* Direct contact may cause mild eye irritation.Symptoms may include inflammation and tearing.

*Ingestion:* Human poison by ingestion (lethal dose of Ethylene glycol for humans reported to be 100 mL). Symptoms may include pain, headache, nausea, vomiting, dizziness, drowsiness and other central nervous system effects. Initially, the central nervous system is stimulated, followed by depression. May potentially result in lethal kidney damage. Could also cause convulsions, coma, respiratory arrest and death.

| | | |
|---|---|---|
| **Effects of long-term (chronic) exposure** | : | Prolonged or repeated ingestion may cause bladder or kidney stones. |
| **Conditions aggravated by overexposure** | : | Pre-existing skin or eye disorders, and impaired liver or kidney functions. |
| **Carcinogenic status** | : | See TOXICOLOGICAL INFORMATION, Section 11. |
| **Additional health hazards** | : | Potential teratogen.See TOXICOLOGICAL INFORMATION, Section 11. |
| **Potential environmental effects** | : | See ECOLOGICAL INFORMATION (Section 12). |

## SECTION 4 - FIRST AID MEASURES

| | | |
|---|---|---|
| **Inhalation** | : | Immediately remove person to fresh air. If breathing has stopped, give artificial respiration. Obtain medical attention if symptoms develop and persist. |
| **Skin contact** | : | Immediately flush with plenty of water, while removing contaminated clothing. If irritation persists, seek prompt medical attention. |
| **Eye contact** | : | Immediately flush eye(s) with plenty of water. After initial flushing, remove any contact lenses if worn, and continue flushing for at least 5 to 10 minutes. If irritation persists, seek prompt medical attention. |
| **Ingestion** | : | Toxic if swallowed. If swallowed, obtain medical attention immediately. Induce vomiting ONLY under the direct supervision of qualified medical personnel or a poison control centre. Never give anything by mouth to an unconscious person. |
| **Notes For Physician** | : | Prompt medical attention is important.Delayed treatment may result in fatality.This product is a CNS depressant. Use of ethanol may be helpful to counter the toxic effects of ethylene glycol by interfering with the absorption rate in the stomach and intestine. |

## SECTION 5 - FIRE FIGHTING MEASURES

| | | | | |
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| **Fire hazards/conditions of flammability** | : | Not flammable under normal conditions of handling. However, may ignite if exposed to extreme heat and flame. Closed containers may rupture if exposed to excess heat or flame due to a build-up of internal pressure. | | |
| **Flammability classification (OSHA 29 CFR 1910.1200)** | : | Combustible Liquid Class III B | | |
| **Flash point** | : | N/Av | | |
| **Flash point Method** | : | COC | **Auto-ignition temperature** | : N/Av |
| **Lower flammable limit (% by vol.)** | : | N/Av | **Upper flammable limit (% by vol.)** | : N/Av |
| **Oxidizing properties** | : | None known. | | |
| **Flame Projection Length** | : | N/Ap | **Flashback observed** | : N/Ap |

**Explosion data: Sensitivity to mechanical impact / static discharge**

: Not expected to be sensitive to mechanical impact or static discharge.

**Suitable extinguishing media**

: Use media suitable to the surrounding fire such as water fog or fine spray, alcohol foams, carbon dioxide and dry chemical.

**Special fire-fighting procedures/equipment** : Firefighters should wear proper protective equipment and self contained breathing apparatus with full face piece operated in positive pressure mode. Move containers from fire area if safe to do so. Water spray may be useful in cooling equipment exposed to heat and flame.

**Hazardous combustion products** : Carbon oxides and other irritating fumes and smoke.

**NFPA Rating**

| 0 - Minimal | 1 - Slight | 2 - Moderate | 3 - Serious | 4 - Severe |
|---|---|---|---|---|

: *Health:* 2 *Flammability:* 1 *Instability:* 0 *Special Hazards:* None

## SECTION 6 - ACCIDENTAL RELEASE MEASURES

**Personal precautions** : Restrict access to area until completion of clean-up. Ensure clean-up is conducted by trained personnel only. All persons dealing with clean-up should wear the appropriate protective equipment including self-contained breathing apparatus. Refer to Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION, for additional information on acceptable personal protective equipment.

**Environmental precautions** : Ensure spilled product does not enter drains, sewers, waterways, or confined spaces.If necessary, dike well ahead of the spill to prevent runoff into drains, sewers, or any natural waterway or drinking supply.

**Spill response/cleanup** : Remove all sources of ignition. Ventilate area of release. Stop spill or leak at source if safely possible.Contain and absorb spilled liquid with non-combustible, inert absorbent material (e.g. sand), then place absorbent material into a container for later disposal (see Section 13). Contaminated absorbent material may pose the same hazards as the spilled product.Notify the appropriate authorities as required.

**Prohibited materials** : Use non-flammable absorbent only.

**Special spill response procedures** : In case of a transportation accident, contact CHEMTREC at 1-800-424-9300 or International at 1-703-527-3887. If a spill/release in excess of the EPA reportable quantity is made into the environment, immediately notify the national response center in the United States (phone: 1-800-424-8002).
US CERCLA Reportable quantity (RQ):Ethylene glycol (5000 lbs.)

## SECTION 7 - HANDLING AND STORAGE

**Safe Handling procedures** : This material is a harmful liquid.Wear suitable protective equipment during handling. Refer to Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION, for additional information on acceptable personal protective equipment. Use with adequate ventilation. Do not ingest.Avoid breathing vapour or mist. Avoid contact with eyes, skin and clothing. Wash with soap and water after handling. Keep away from extreme heat and flame. Keep away from acids and other incompatibles. Use caution when opening cap. Keep containers tightly closed when not in use. Empty containers retain residue (liquid and/or vapour) and can be dangerous. Keep out of the reach of children.

**Storage requirements** : Store in a cool, dry, well-ventilated area. Store away from areas of excessive heat, open flames, sparks, and other possible sources of ignition. Keep away from incompatibles. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. Inspect periodically for damage or leaks. No smoking in the area.

**Incompatible materials** : Strong oxidizers (e.g. Chlorine, Peroxides, etc.), acids (e.g. sulfuric acid, nitric acid), caustics.

**Special packaging materials** : Not available.

## SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTION

| | | |
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| **Ventilation and engineering measures** | : | Use with adequate ventilation. Use general or local exhaust ventilation to maintain air concentrations below recommended exposure limits. |
| **Respiratory protection** | : | Not required under normal conditions of handling. If mists are formed, or in confined spaces, respiratory protection may be required.NIOSH-approved respirators are recommended. Seek advice from respiratory protection specialists. |
| **Skin protection** | : | Gloves impervious to the material are recommended. Advice should be sought from glove suppliers. |
| **Eye / face protection** | : | Chemical splash goggles are recommended. A full face shield may also be necessary. |
| **Other protective equipment** | : | Emergency showers and eyewash facilities should be nearby. Wear a chemically resistant apron and long sleeves when dispensing, to prevent skin contact. |
| **General hygiene considerations** | : | Do not ingest.Avoid breathing vapour or mist. Avoid contact with eyes, skin and clothing. When using do not eat or drink.Upon completion of work, wash hands before eating, drinking, smoking or use of toilet facilities. Remove soiled clothing and wash it thoroughly before reuse. |
| **Permissible exposure levels** | : | For individual ingredient exposure levels, see Section 2. |

## SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

| | | | | | |
|---|---|---|---|---|---|
| **Physical state** | : | Liquid. | **Appearance** | : | Blue liquid. |
| **Odour** | : | Little or no odour. | **Odour threshold** | : | N/Av |
| **pH** | : | 10.2 - 10.8 | | | |
| **Boiling point** | : | 107°C / 224.6°F | **Specific gravity** | : | 1.06 - 1.09 |
| **Melting/Freezing point** | : | N/Av | **Coefficient of water/oil distribution** | : | N/Av |
| **Vapour pressure (mmHg @ 20° C / 68° F)** | : | N/Av | **Solubility in water** | : | Complete |
| **Vapour density (Air = 1)** | : | N/Av | **Evaporation rate (n-Butyl acetate = 1)** | : | N/Av |
| **Volatile organic Compounds (VOC's)** | : | N/Av | **Volatiles (% by weight)** | : | N/Av |

## SECTION 10 - REACTIVITY AND STABILITY DATA

| | | |
|---|---|---|
| **Stability and reactivity** | : | Stable under the recommended storage and handling conditions prescribed. |
| **Hazardous polymerization** | : | Will not occur. |
| **Conditions to avoid** | : | Avoid heat and open flame. Do not use in areas without adequate ventilation. |
| **Materials To Avoid And Incompatibility** | : | Incompatible materials (see Section 7). |
| **Hazardous decomposition products** | : | None known, refer to hazardous combustion products in Section 5. |

## SECTION 11 - TOXICOLOGICAL INFORMATION

| | | |
|---|---|---|
| **Toxicological data** | : | There is no available data for the product itself, only for the ingredients. See below for individual ingredient acute toxicity data. |

| Ingredients | $LC_{50}$(4hr) inh, rat | $LD_{50}$ oral | $LD_{50}$ dermal |
|---|---|---|---|
| Diethylene glycol | N/Av | 12,565 mg/kg (rat); 4400 mg/kg (rabbit) | 11,890 mg/kg (rabbit) |
| Ethylene glycol | N/Av | 4700 mg/kg (rat) | 9530 µL/kg (rabbit) |

**Carcinogenic status** : No components are listed as carcinogens by ACGIH, IARC, OSHA or NTP.

**Reproductive effects** : None known.

**Teratogenicity** : Contains ethylene glycol, which may cause teratogenic effects at doses which are not maternally toxic, based on animal data.

**Mutagenicity** : None known.

**Epidemiology** : Not available.

**Sensitization to material** : None known.

**Synergistic materials** : Not available.

**Irriatancy** : May be mildly irritating to eyes and skin.

**other important hazards** : CNS depression may result from extreme exposures.

## SECTION 12 - ECOLOGICAL INFORMATION

**Environmental effects** : The ecological characteristics of this product have not been fully investigated. The product should not be allowed to enter drains or water courses, or be deposited where it can affect ground or surface waters.

**Important environmental characteristics** : Not available.

**Ecotoxicological** : No data is available on the product itself.

## SECTION 13 - DISPOSAL CONSIDERATIONS

**Handling for Disposal** : Handle waste according to recommendations in Section 7.

**Methods of Disposal** : Dispose in accordance with all applicable federal, state, provincial and local regulations. Contact your local, state, provincial or federal environmental agency for specific rules.

**RCRA** : If this product, as supplied, becomes a waste in the United States, it may meet the criteria of a hazardous waste as defined under RCRA, Title 40 CFR 261. It is the responsibility of the waste generator to determine the proper waste identification and disposal method. For disposal of unused or waste material, check with local, state and federal environmental agencies.

## SECTION 14 - TRANSPORTATION INFORMATION

| Regulatory Information | UN Number | Shipping Name | Class | Packing Group | Label |
|---|---|---|---|---|---|
| 49CFR/DOT | None | Not regulated. | Not regulated | -None- |  |
| **49CFR/DOT Additional information** | Not regulated when the quantity of Ethylene glycol is less than 5000 pounds per container. If the quantity of Ethylene glycol is greater than 5000 pounds per container, the following DOT shipping description applies:<br>RQ Environmentally hazardous substances, liquid, n.o.s. (Contains: Ethylene glycol), 9, UN3082, III. | | | | |
| TDG | None | Not regulated. | Not regulated | -None- |  |
| **TDG Additional information** | None. | | | | |

| | | | | | |
|---|---|---|---|---|---|
| ICAO/IATA | None | Not regulated. | Not regulated | -None- |  |
| **ICAO/IATA Additional information** | None. | | | | |
| IMDG | None | Not regulated. | Not regulated | -None- |  |
| **IMDG Additional information** | None. | | | | |

## SECTION 15 - REGULATORY INFORMATION

**US Federal Information:**

OSHA: This material is classified as hazardous under OSHA regulations (29CFR 1910.1200).

TSCA: All listed ingredients appear on the Toxic Substances Control Act (TSCA) inventory.

CERCLA Reportable Quantity (RQ) (40 CFR 117.302):Ethylene glycol (5000 lbs.).

SARA TITLE III: Sec. 302, Extremely Hazardous Substances, 40 CFR 355: No Extremely Hazardous Substances are present in this material.

SARA TITLE III: Sec. 311 and 312, MSDS Requirements, 40 CFR 370 Hazard Classes: Immediate (Acute) health hazard; Chronic health hazard. Under SARA Sections 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are 500 pounds for the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

SARA TITLE III: Sec. 313, Toxic Chemicals Notification, 40 CFR 372:This product may be subject to SARA notification requirements, since it contains Toxic Chemical constituents above their de minimus concentrations. This product contains: Ethylene glycol.

**US State Right to Know Laws:**

New Jersey Labeling Requirements: This product contains the following substances required to be disclosed on product labeling: Ethylene glycol (CAS # 107-21-1, 40 - 70%); water (CAS # 7732-18-5, <50%); Diethylene glycol (CAS # 111-46-6, 1 - 4%). Ethylene glycol is considered a hazardous substance in the State of New Jersey.

California Proposition 65: To the best of our knowledge, this product does not contain any chemicals known to the State of California to cause cancer or reproductive harm.

**International Information:**

Canadian WHMIS Classification:Class D2A (Materials Causing Other Toxic Effects, Very Toxic Material) .

Canadian Environmental Protection Act (CEPA) information: All ingredients listed appear on the Domestic Substances List (DSL).

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

## SECTION 16 - OTHER INFORMATION

**HMIS Rating** : * - Chronic hazard 0 - Minimal 1 - Slight 2 - Moderate 3 - Serious 4 - Severe

*Health:* * 2 *Flammability:* 1 *Reactivity:* 0

**Legend** :

ACGIH: American Conference of Governmental Industrial Hygienists
AIHA: American Industrial Hygiene Association
CAS: Chemical Abstract Services
CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CFR: Code of Federal Regulations
COC: Cleveland Open Cup
DOT: Department of Transportation
EPA: Environmental Protection Agency
NFPA: National Fire Protection Association
HMIS: Hazardous Materials Identification System
HSDB: Hazardous Substances Data Bank
IARC: International Agency for Research on Cancer
IATA: International Air Transport Association
ICAO: International Civil Aviation Organisation
IMDG: International Maritime Dangerous Goods
N/Ap: not applicable
N/Av: not available
NIOSH: National Institute of Occupational Safety and Health
NTP: National Toxicology Program
OSHA: Occupational Safety and Health Administration
PEL: Permissible Exposure Limit
RCRA: Resource Conservation and Recovery Act
RTECS: Registry of Toxic Effects of Chemical Substances
SARA: Superfund Amendments & Reauthorization Act
STEL: Short Term Exposure Limit
TLV: Threshold Limit Values
TWA: Time Weighted Average
WEEL: Workplace Environmental Exposure Level
WHMIS: Workplace Hazardous Materials Identification System

**References** :

1. ACGIH, Threshold Limit Values and Biological Exposure Indices for 2005.
2. International Agency for Research on Cancer Monographs, searched 2006.
3. Canadian Centre for Occupational Health and Safety, CCInfoWeb databases, 2006 (Chempendium, HSDB and RTECs).
4. Material Safety Data Sheet from manufacturer.
5. California Proposition 65 List - February 3, 2006 version.

| | |
|---|---|
| **Prepared for:**<br>Cummins Filtration<br>1200 Fleetguard Road<br>Cookeville, Tennessee, U.S.A., 38506<br><br>http://www.fleetguard.com | Cummins Filtration |
| **Prepared by:**<br>ICC The Compliance Center Inc.<br>**Canada: 1-888-977-4834**<br>**USA: 1-888-442-9628**<br>http://www.thecompliancecenter.com | The Compliance Center Inc. |

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