



ES COMPLEAT COOLANT / EG CONCENTRATE (ETHYLENE GLYCOL BASED ANTIFREEZE)

MSDS No.:LT16588a

MSDS Preparation Date: April 21, 2006

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## MATERIAL SAFETY DATA SHEET

#### SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

Product identifier : ES COMPLEAT COOLANT / EG CONCENTRATE (ETHYLENE

**GLYCOL BASED ANTIFREEZE)** 

Product Code(s) : CC2820 (1 Gallon / 3.785 L Bottle); CC2821 (55 gallon / 208 L Drum); CC2822 (Bulk);

CC2847 (5 Gallon / 18.9 L Pail); CC2823 (Tote tanks).

Product Use : Concentrated antifreeze / coolant.

Chemical Family : Mixture.

Supplier's name and address: Manufacturer's name and address:

Cummins Filtration Refer to Supplier

1200 Fleetguard Road Cookeville, TN, U.S.A.

38506

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

			ACGIH TLV		OSHA PEL	
<u>Ingredients</u>	CAS#	% (weight)	<u>TWA</u>	STEL	PEL	<u>STEL</u>
Ethylene glycol	107-21-1	90.0 - 100.0	100 mg/m3 (ceiling)	N/Av	50 ppm (125 mg/m3) (ceiling)	N/Av
Diethylene glycol	111-46-6	1.0 - 5.0 *5.0 - 10.0	10 mg/m3	N/Av	N/Av	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.

\*Note: The % (weight) concentration of 'Diethylene glycol' will vary by batch. The ranges listed cover all potential concentration levels. Refer to Health Canada's interpretation, PIS No. 36, of the Controlled Products Regulations, Section 11(3).

### **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.





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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

Conditions aggravated by

overexposure

Prolonged or repeated ingestion may cause bladder or kidney stones.

Pre-existing skin or eye disorders, and impaired liver or kidney functions.

Carcinogenic status

See TOXICOLOGICAL INFORMATION, Section 11.

Additional health hazards Potential environmental effects

Potential teratogen. See TOXICOLOGICAL INFORMATION, Section 11.

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**

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. Vapours are heavier than air and collect in confined and low-lying areas.

Flammability classification (OSHA 29 CFR 1910.1200)

Combustible Liquid Class III B

111°C / 232°F Flash point

Flash point Method COC Auto-ignition temperature : N/Av

Lower flammable limit (% by Upper flammable limit (% by

vol.) vol.) 3.2 : 15.3

**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.





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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** 

Special spill response procedures

Use non-flammable absorbent only.

: 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.

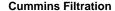
Incompatible materials

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



Filtration

1200 Fleetguard Road Cookeville, Tennessee, U.S.A., 38506 Phone (931) 526-9551

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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.

Chemical splash goggles are recommended. A full face shield may also be necessary. Eye / face protection

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

Odour

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 **Appearance** Blue liquid. : Liquid.

pН 9.4 - 10.0 (100%); 10.2 -

10.8 (50%).

**Boiling point** 195°C / 383°F Specific gravity : 1.11 - 1.14

Melting/Freezing point N/Av Coefficient of water/oil

Little or no odour.

distribution

Odour threshold

Solubility in water

Vapour pressure (mmHg @

20° C / 68° F)

0.05

Vapour density (Air = 1) 2.1

**Evaporation rate (n-Butyl** 

acetate = 1) N/Av

N/Av

N/Av

Complete

**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 **Materials To Avoid And** Incompatibility

: Avoid heat and open flame. Do not use in areas without adequate ventilation.

Incompatible materials (see Section 7).

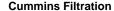
Hazardous decomposition products

### **SECTION 11 - TOXICOLOGICAL INFORMATION**

: None known, refer to hazardous combustion products in Section 5.

### Toxicological data

There is no available data for the product itself, only for the ingredients. See below for individual ingredient acute toxicity data.





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	LC50(4hr)	LD50		
<u>Ingredients</u>	inh, rat	<u>oral</u>	dermal	
Ethylene glycol	N/Av	4700 mg/kg (rat)	9530 μL/kg (rabbit)	
Diethylene glycol	N/Av	12,565 mg/kg (rat); 4400 mg/kg (rabbit)	11,890 mg/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 Methods of Disposal

- : Handle waste according to recommendations in Section 7.
- : 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-	$\otimes$		
49CFR/DOT Additional information	greater than 5000 pounds per container, the following DOT shipping description applies:						
TDG	None	Not regulated.	Not regulated	-None-	$\otimes$		
TDG Additional information	None.						





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ICAO/IATA	None	Not regulated.	Not regulated	-None-	$\otimes$
ICAO/IATA Additional information	None.				
IMDG	None	Not regulated.	Not regulated	-None-	$\otimes$
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, 90 - 100%); Diethylene glycol (111-46-6, 1 - 10%); water (CAS # 7732-18-5, <5%). 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.

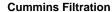
## **International Information:**

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

1200 Fleetguard Road Cookeville, Tennessee, U.S.A., 38506 Phone (931) 526-9551

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: 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:

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

http://www.fleetguard.com

## Prepared by:

ICC The Compliance Center Inc. Canada: 1-888-977-4834 USA: 1-888-442-9628

http://www.thecompliancecenter.com











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