

1. Product and Company Identification

Product identifier	ES COMPLEAT EG CONCENTRATE (Ethylene glycol based antifreeze)	
Version #	01	
Issue date	02-27-2015	
CAS #	Mixture	
Product code	CC2820, CC2821, CC2822, CC2847, CC2823	
MSDS Number	LT16588	
Product use	Concentrated antifreeze / coolant.	
Manufacturer information	Cummins Filtration 1200 Fleetguard Road Cookeville, TN 38506 United States 24 Hours per day	
		1-800-22FILTER (1-800-223-4583) Chemtrec 1-800-424-9300 Chemtrec 703-527-3887
Supplier	Not available.	

2. Hazards Identification

Emergency overview	DANGER!
	TOXIC. Can cause adverse reproductive effects - such as birth defects, miscarriages, or infertility. Prolonged exposure may cause chronic effects.
Potential health effects	
Routes of exposure	Inhalation. Ingestion. Skin contact. Eye contact.
Eyes	Contact with eyes may cause irritation. Avoid contact with eyes.
Skin	May cause skin irritation. Avoid contact with the skin. May be absorbed and cause symptoms similar to those listed for ingestion.
Inhalation	May cause irritation of respiratory tract. Prolonged inhalation may be harmful. Avoid breathing dust/fume/gas/mist/vapors/spray.
Ingestion	Components of the product may be absorbed into the body by ingestion. Irritating. May cause nausea, stomach pain and vomiting. Do not ingest. Human poison by ingestion (lethal dose of Ethylene glycol for humans reported to be 100 mL). Symptoms of poisoning may include cyanosis (bluish discoloration of the skin), nausea, dizziness, rapid heartbeat, irregular breathing, coma and death. Initially, the central nervous system is stimulated, followed by depression.
Target organs	Central nervous system. Eyes. Respiratory system. Skin.
Chronic effects	Sterility. Pregnant women or women of child-bearing age should not be exposed to this product. Can cause adverse reproductive effects - such as birth defects, miscarriages, or infertility. Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis. May potentially result in lethal kidney damage. Prolonged or repeated ingestion may cause bladder or kidney stones.
Most important symptoms/effects, acute and delayed	Not available.
Potential environmental effects	May cause long-term adverse effects in the environment.

3. Composition / Information on Ingredients

Components	CAS #	Percent
Ethylene Glycol	107-21-1	90.0-100.0
Sodium Borate	1330-43-4	0.1-0.5
Other components below reportable levels		2.414

4. First Aid Measures

First aid procedures

Inhalation

Move to fresh air. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a physician or poison control center immediately.

Skin contact

Remove and isolate contaminated clothing and shoes. Immediately flush skin with plenty of water. Call a physician or poison control center immediately. For minor skin contact, avoid spreading material on unaffected skin. Wash clothing separately before reuse.

Eye contact

Immediately flush eyes with plenty of water for at least 15 minutes. If a contact lens is present, DO NOT delay irrigation or attempt to remove the lens. Continue rinsing. Call a physician or poison control center immediately.

Ingestion

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Rinse mouth thoroughly. Never give anything by mouth to a victim who is unconscious or is having convulsions. Do not induce vomiting without advice from poison control center. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Do not use mouth-to-mouth method if victim ingested the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

Notes to physician

Symptoms may be delayed.

General advice

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

5. Fire Fighting Measures

Flammable properties

Not flammable by WHMIS criteria.

Extinguishing media

Suitable extinguishing media

Alcohol resistant foam. Water fog. Dry chemical powder. Carbon dioxide (CO₂).

Unsuitable extinguishing media

Do not use water jet as an extinguisher, as this will spread the fire.

Fire fighting equipment/instructions

Not available.

Explosion data

Sensitivity to static discharge

Not available.

Sensitivity to mechanical impact

Not available.

Hazardous combustion products

Not available.

6. Accidental Release Measures

Personal precautions

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. For personal protection, see section 8 of the MSDS.

Environmental precautions

Do not contaminate water.

Methods and materials for containment and cleaning up

This product is miscible in water.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Use water spray to reduce vapors or divert vapor cloud drift. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the MSDS.

Other information

Clean up in accordance with all applicable regulations.

7. Handling and Storage

Handling

Do not breathe mist or vapor. Do not get this material in contact with eyes. Do not get this material in contact with skin. Avoid prolonged exposure. Do not get this material on clothing. Do not use in areas without adequate ventilation. Wash thoroughly after handling. Avoid release to the environment.

Storage

Keep locked up. Store in a closed container away from incompatible materials. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the MSDS). Keep away from food, drink and animal feedings.

8. Exposure Controls / Personal Protection

Occupational exposure limits

US. ACGIH Threshold Limit Values Components

Components	Type	Value	Form
Ethylene Glycol (CAS 107-21-1)	Ceiling	100 mg/m ³	Aerosol.
Sodium Borate (CAS 1330-43-4)	STEL	6 mg/m ³	Inhalable fraction.
	TWA	2 mg/m ³	Inhalable fraction.

Biological limit values

No biological exposure limits noted for the ingredient(s).

Engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

Eye/face protection

Wear safety glasses with side shields (or goggles).

Skin protection

Wear chemical protective equipment that is specifically recommended by the manufacturer. It may provide little or no thermal protection.

Respiratory protection

Use a positive-pressure air-supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air-purifying respirators may not provide adequate protection.

Hand protection

Wear protective gloves.

9. Physical & Chemical Properties

Appearance

Physical state

Liquid.

Form

Liquid.

Color

Blue

Odor

Characteristic odour.

Odor threshold

Not available.

pH

9.4 - 10 (100%); 10.2 - 10.8 (50%)

Vapor pressure

0.05 mm Hg @ 20°C

Vapor density

2.1

Boiling point

383 °F (195 °C)

Melting point/Freezing point

Not available.

Solubility (water)

completely miscible

Specific gravity

1.11 - 1.14

Relative density

Not available.

Flash point

231.8 °F (111.0 °C) Open Cup

Flammability limits in air, upper, % by volume

15.3

Flammability limits in air, lower, % by volume

3.2

Auto-ignition temperature

Not available.

Evaporation rate

Not available.

Partition coefficient (n-octanol/water) Not available.

10. Chemical Stability & Reactivity Information

Chemical stability Material is stable under normal conditions.
Conditions to avoid Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials Strong oxidizing agents.
Hazardous decomposition products Not available.
Possibility of hazardous reactions Not available.

11. Toxicological Information

Toxicological data

Components	Species	Test Results
Ethylene Glycol (CAS 107-21-1)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	9530 mg/kg
<i>Inhalation</i>		
LC50	Rat	10.92 mg/l, 4 hours
<i>Oral</i>		
LD50	Human	1110 - 1665 mg/kg
	Rat	4000 mg/kg
Sodium Borate (CAS 1330-43-4)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	> 2000 mg/kg
<i>Inhalation</i>		
LC50	Rat	> 2.04 mg/l/4h
<i>Oral</i>		
LD50	Rat	1200 mg/kg
Acute effects		
Sensitization	Not expected to be a skin or respiratory sensitizer.	
Chronic effects	Prolonged inhalation may be harmful. Not expected to be hazardous by WHMIS criteria.	
Carcinogenicity		
ACGIH Carcinogens		
Ethylene Glycol (CAS 107-21-1)	A4 Not classifiable as a human carcinogen.	
Sodium Borate (CAS 1330-43-4)	A4 Not classifiable as a human carcinogen.	
Skin corrosion/irritation	Not available.	
Serious eye damage/irritation	Not available.	
Mutagenicity	Not expected to be hazardous by WHMIS criteria.	
Reproductive effects	Hazardous by WHMIS criteria. Can cause adverse reproductive effects - such as birth defects, miscarriages, or infertility.	
Teratogenicity	Not expected to be hazardous by WHMIS criteria.	
Most important symptoms/effects, acute and delayed	Not available.	
Further information	Reproductive toxicity. Symptoms may be delayed.	

12. Ecological Information

Ecotoxicological data

Components		Species	Test Results
Ethylene Glycol (CAS 107-21-1)			
<i>Acute</i>			
	LC50	Rainbow trout (<i>Oncorhynchus mykiss</i>)	22810 mg/l, 96 Hours
Aquatic			
Crustacea	LC50	Water flea (<i>Daphnia magna</i>)	46300 - 57000 mg/l, 48 hours
<i>Acute</i>			
Algae	IC50	Green algae (<i>Selenastrum capricornutum</i>)	10940 mg/l, 96 Hours
	NOEC	Green algae (<i>Selenastrum capricornutum</i>)	10000 mg/l, 96 Hours
Sodium Borate (CAS 1330-43-4)			
Aquatic			
<i>Acute</i>			
Algae	EC50	Green algae (<i>Selenastrum capricornutum</i>)	15.4 mg/l, 96 Hours
Crustacea	EC50	Water flea (<i>Daphnia magna</i>)	141 mg/kg, 48 Hours
Fish	LC50	Fathead minnow (<i>Pimephales promelas</i>)	332 mg/l, 96 Hours
<i>Chronic</i>			
Crustacea	NOEC	Water flea (<i>Daphnia magna</i>)	6 mg/l, 21 days
Fish	NOEC	Japanese rice fish (<i>Oryzias latipes</i>)	2.1 mg/l, 87 days
Ecotoxicity	Contains a substance which causes risk of hazardous effects to the environment. Do not allow this material to drain into sewers/water supplies.		
Environmental effects	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.		
Aquatic toxicity	Not available.		
Persistence and degradability	Not available.		
Bioaccumulation / accumulation			
Bioaccumulative potential			
Bioconcentration factor			
Ethylene Glycol		10	
Partition coefficient			
Ethylene Glycol		-1.36	
Mobility in environmental media	This product is miscible in water.		

13. Disposal Considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Dispose in accordance with all applicable regulations.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport Information

TDG

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

15. Regulatory Information

Canadian regulations This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

WHMIS status Controlled

WHMIS classification
D1B - Immediate/Serious-TOXIC
D2A - Other Toxic Effects-VERY TOXIC
D2B - Other Toxic Effects-TOXIC

WHMIS labeling



International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other Information

HMIS® ratings
Health: 2*
Flammability: 1
Physical hazard: 0

NFPA ratings
Health: 2
Flammability: 1
Instability: 0

Disclaimer
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This data sheet contains changes from the previous version in section(s):

Product and Company Identification: Product Codes
Composition / Information on Ingredients: Ingredients
Physical & Chemical Properties: Multiple Properties
Regulatory Information: Canada
GHS: Classification

Bibliography

Not available.

Legend to abbreviations and acronyms used in the SDS

Not available.