

1. Identification

Product identifier	Premium Concentrated Antifreeze/Coolant	
Other means of identification		
FIR No.	164315	
Recommended use	Engine antifreeze/coolant	
Recommended restrictions	None known.	
Manufacturer/Importer/Supplier/Distributor information		
Company Name	Ford Motor Company	
Address	Attention: SDS Information, P.O. Box 1899 Dearborn, Michigan 48121 USA	
Telephone	1-800-392-3673	
SDS Information	1-800-448-2063 (USA and Canada) fordsds.com	
Emergency telephone numbers	Poison Control Center: USA and Canada: 1-800-959-3673 INFOTRAC (Transportation): USA and Canada 1-800-535-5053	

2. Hazard(s) identification

Physical hazards	Not classified.	
Health hazards	Acute toxicity, oral	Category 4
	Reproductive toxicity	Category 1B
	Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation
Environmental hazards	Not classified.	
OSHA defined hazards	Not classified.	

Label elements



Signal word	Danger
Hazard statement	Harmful if swallowed. May cause respiratory irritation. May damage fertility or the unborn child.
Precautionary statement	
Prevention	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe mist/vapors. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection.
Response	IF exposed: Call a POISON CENTER or doctor/physician.
Storage	Store locked up. Protect from sunlight.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	Aspiration may cause pulmonary edema and pneumonitis. Irritating to eyes and skin. HARMFUL OR FATAL IF SWALLOWED.
Supplemental information	None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
ETHYLENE GLYCOL		107-21-1	93
2,2'-Oxydiethanol		111-46-6	4

4. First-aid measures

Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact	Immediately take off all contaminated clothing. For skin contact, wash immediately with soap and water. Get medical attention if irritation develops and persists.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. Call a physician or poison control center immediately. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
Most important symptoms/effects, acute and delayed	Convulsions. Dizziness. Nausea, vomiting. Abdominal pain. May cause respiratory irritation.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
General information	IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). 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

Suitable extinguishing media	Alcohol resistant foam. Powder. Carbon dioxide (CO ₂).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed. Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Avoid contact with eyes, skin, and clothing. Do not breathe mist/vapors. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Keep unnecessary personnel away. Local authorities should be advised if significant spillages cannot be contained. Wear appropriate protective equipment and clothing during clean-up. For personal protection, see section 8 of the SDS.
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. Absorb in vermiculite, dry sand or earth and place into containers. 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 SDS.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling	Pregnant or breastfeeding women must not handle this product. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid contact with eyes, skin, and clothing. Avoid breathing mist/vapors. Avoid prolonged exposure. Provide adequate ventilation. When using, do not eat, drink or smoke. Do not taste or swallow. Should be handled in closed systems, if possible. Wash hands thoroughly after handling. Observe good industrial hygiene practices. Wear appropriate personal protective equipment. For personal protection, see Section 8 of the SDS.
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Conditions for safe storage, including any incompatibilities Store locked up. Store in tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
ETHYLENE GLYCOL (CAS 107-21-1)	STEL	10 mg/m ³	Aerosol, inhalable.
		50 ppm	Vapor fraction
	TWA	25 ppm	Vapor fraction

US. Workplace Environmental Exposure Level (WEEL) Guides

Components	Type	Value
2,2'-Oxydiethanol (CAS 111-46-6)	TWA	10 mg/m ³

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

Appropriate engineering controls Use adequate ventilation to control airborne concentrations below the exposure limits/guidelines. If user operations generate a vapor, dust and/or mist, use process enclosure, appropriate local exhaust ventilation, or other engineering controls to control airborne levels below the recommended exposure limits/guidelines.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection

Suitable chemical protective gloves should be worn when the potential exists for skin exposure. The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other. Use protective gloves made of: Nitrile. Polyvinyl chloride (PVC). Rubber gloves.

Other

Wear appropriate chemical resistant clothing if applicable.

Respiratory protection

If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, an approved respirator must be worn. Respirator selection, use and maintenance should be in accordance with the requirements of OSHA Respiratory Protection Standard 29 CFR 1910.134 and/or Canadian Standard CSA Z94.4.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

Observe any medical surveillance requirements. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Physical state Liquid.

Form Liquid.

Color Green.

Odor Not available.

Odor threshold Not available.

pH 9 - 11

Melting point/freezing point Not available.

Initial boiling point and boiling range 387.7 °F (197.61 °C)

Flash point > 232.0 °F (> 111.1 °C)

Evaporation rate Not available.

Flammability (solid, gas) Not applicable.

Upper/lower flammability or explosive limits

Explosive limit - lower (%) 3.2 %

Explosive limit - upper (%)	15.3 %
Vapor pressure	0.12 hPa @25 °C
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Density	1.12 @ 15.6 °C

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents. Alkali metals. Strong acids.
Hazardous decomposition products	Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May cause irritation to the respiratory system. Prolonged inhalation may be harmful.
Skin contact	May be irritating to the skin.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	HARMFUL OR FATAL IF SWALLOWED.

Symptoms related to the physical, chemical and toxicological characteristics Convulsions. Dizziness. Nausea, vomiting. Abdominal pain. May cause respiratory irritation.

Information on toxicological effects

Acute toxicity

Components	Species	Calculated/Test Results
2,2'-Oxydiethanol (CAS 111-46-6)		
Acute		
Dermal		
LD50	Rabbit	11890 mg/kg
Oral		
LD50	Cat	3300 mg/kg
	Dog	9000 mg/kg
	Guinea pig	8700 mg/kg
		14 g/kg
	Mouse	26500 mg/kg
		23700 mg/kg
		13.3 g/kg
	Rabbit	26.9 g/kg
	Rat	16600 mg/kg

Components	Species	Calculated/Test Results
		12570 mg/kg
		15.6 g/kg
Other		
LD50	Mouse	22500 mg/kg
		9.6 g/kg
	Rabbit	2000 mg/kg
	Rat	18800 mg/kg
		7700 mg/kg
		18.8 g/kg
		8.9 g/kg
		7.7 g/kg

ETHYLENE GLYCOL (CAS 107-21-1)

Acute

Dermal

LD50 Rabbit 9530 mg/kg

Oral

LD50 Cat 1650 mg/kg

Dog > 8.81 g/kg

5500 mg/kg

Guinea pig 8.2 g/kg

Mouse 14.6 g/kg

Rat 5.89 g/kg

Other

LD50 Mouse 10 g/kg

5.8 g/kg

Rat 5010 mg/kg

3260 mg/kg

2800 mg/kg

Skin corrosion/irritation Prolonged skin contact may cause temporary irritation.

Serious eye damage/eye irritation Direct contact with eyes may cause temporary irritation.

Respiratory or skin sensitization

Respiratory sensitization Not a respiratory sensitizer.

Skin sensitization This product is not expected to cause skin sensitization.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

Reproductive toxicity May damage fertility or the unborn child.

Specific target organ toxicity - single exposure May cause respiratory irritation.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard If aspirated into lungs during swallowing or vomiting, may cause chemical pneumonia, pulmonary injury or death.

Chronic effects Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Ecotoxicity

Components	Species	Calculated/Test Results
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2,2'-Oxydiethanol (CAS 111-46-6)

Aquatic

Fish	LC50	Western mosquitofish (<i>Gambusia affinis</i>) > 32000 mg/l, 96 hours
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ETHYLENE GLYCOL (CAS 107-21-1)

Aquatic

Fish	LC50	Fathead minnow (<i>Pimephales promelas</i>) 8050 mg/l, 96 hours
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Persistence and degradability No data is available on the degradability of any ingredients in the mixture.

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

ETHYLENE GLYCOL	-1.36
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Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

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 Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not established.

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Toxic Substances Control Act (TSCA) All components of the mixture on the TSCA 8(b) inventory are designated "active".

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

ETHYLENE GLYCOL (CAS 107-21-1)	Listed.
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SARA 304 Emergency release notification

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical Yes

Classified hazard categories Acute toxicity (any route of exposure)
Reproductive toxicity
Specific target organ toxicity (single or repeated exposure)

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
ETHYLENE GLYCOL	107-21-1	93

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

ETHYLENE GLYCOL (CAS 107-21-1)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Contains component(s) regulated under the Safe Drinking Water Act.

US state regulations

California Proposition 65



WARNING: This product can expose you to ETHYLENE GLYCOL, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

California Proposition 65 - CRT: Listed date/Developmental toxin

ETHYLENE GLYCOL (CAS 107-21-1) Listed: June 19, 2015

International Inventories

All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.

16. Other information, including date of preparation or last revision

Issue date 05-01-2019
Version 01
HMIS® ratings Health: 2
Flammability: 1
Physical hazard: 0
NFPA ratings Health: 2
Flammability: 1
Instability: 0

Preparation Information and Disclaimer

This document was prepared by FCSD-Toxicology, Ford Motor Company, Fairlane Business Park IV, 17225 Federal Drive, Allen Park, MI 48101, USA, based in part on information provided by the manufacturer. The information on this data sheet represents our current data and is accurate to the best of our knowledge as to the proper handling of this product under normal conditions and in accordance with the application specified on the packaging and/or technical guidance literature. Any other use of the product which involves using the product in combination with any other product or any other process is the responsibility of the user. To the extent that there are any differences between this product's Safety Data Sheet (SDS) and the consumer packaged product labels, the SDS should be followed.

Part number(s) VC-5, VC-5-A1