

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



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| 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. 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 swallowed: Call a poison center/doctor if you feel unwell. Rinse mouth. If inhaled: Remove person to fresh air and keep comfortable for breathing. If exposed or concerned: Get medical advice/attention. |
| Storage | Store in a well-ventilated place. Keep container tightly closed. 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) | HARMFUL OR FATAL IF SWALLOWED. Aspiration may cause pulmonary edema and pneumonitis. Irritating to eyes and skin. |
| Supplemental information | None. |

3. Composition/information on ingredients

Mixtures

| Chemical name | Common name and synonyms | CAS number | % |
|-------------------|--------------------------|------------|------|
| ETHYLENE GLYCOL | | 107-21-1 | 90.5 |
| 2,2'-Oxydiethanol | | 111-46-6 | 4.75 |

4. First-aid measures

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|---|---|
| Inhalation | Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison center or doctor/physician if you feel unwell. |
| Skin contact | Wash off with soap and water. Get medical attention if irritation develops and persists. |
| Eye contact | Rinse with water. Get medical attention if irritation develops and persists. |
| Ingestion | Call a physician or poison control center immediately. Rinse mouth. 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

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| 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

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| Personal precautions, protective equipment and emergency procedures | Avoid contact with eyes, skin, and clothing. Avoid breathing 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 | Use water spray to reduce vapors or divert vapor cloud drift. 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. Observe good industrial hygiene practices. Wash hands thoroughly after handling. Wear appropriate personal protective equipment. For personal protection, see Section 8 of the SDS.

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. Neoprene. Polyvinyl chloride (PVC).

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

10 - 11.4

Melting point/freezing point

Not available.

| | |
|---|-------------------------------------|
| Initial boiling point and boiling range | Not available. |
| Flash point | > 249.8 °F (> 121.0 °C) |
| Evaporation rate | Not available. |
| Flammability (solid, gas) | Not applicable. |
| Upper/lower flammability or explosive limits | |
| Flammability limit - lower (%) | 3.2 % v/v |
| Flammability limit - upper (%) | 15.3 % v/v |
| Explosive limit - lower (%) | Not available. |
| Explosive limit - upper (%) | Not available. |
| Vapor pressure | 23.33 hPa (@ 20 °C) |
| Vapor density | Not available. |
| Relative density | 1.127 |
| Relative density temperature | 60.08 °F (15.6 °C) |
| Solubility(ies) | |
| Solubility (water) | Soluble |
| Partition coefficient (n-octanol/water) | Not available. |
| Auto-ignition temperature | Not available. |
| Decomposition temperature | Not available. |
| Viscosity | Not available. |
| Other information | |
| Density | 1.24 g/cm ³ (@ 15.56 °C) |

10. Stability and reactivity

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|---|--|
| 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 | Contact with incompatible materials. |
| Incompatible materials | Acids. Bases. Strong oxidizing agents. Alkali metals. Alkali earth metals. |
| 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

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|---------------------|--|
| Inhalation | May cause irritation to the respiratory system. Prolonged inhalation may be harmful. |
| Skin contact | Irritating to skin. |
| Eye contact | Irritating to eyes. |
| 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 |

| Components | Species | Calculated/Test Results | |
|---|---|-------------------------|-------------|
| Oral | | | |
| LD50 | Cat | 3300 mg/kg | |
| | Dog | 9000 mg/kg | |
| | Guinea pig | | 8700 mg/kg |
| | | | 14 g/kg |
| | | | 26500 mg/kg |
| | Mouse | | 23700 mg/kg |
| | | | 13.3 g/kg |
| | Rabbit | 26.9 g/kg | |
| | Rat | | 16600 mg/kg |
| | | | 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 | |
| | | > 8.81 g/kg | |
| | Dog | 5500 mg/kg | |
| | | 8.2 g/kg | |
| | | 14.6 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 | Irritating to skin. | | |
| Serious eye damage/eye irritation | Irritating to eyes. | | |
| Respiratory or skin sensitization | | | |
| Respiratory sensitization | Based on available data, the classification criteria are not met. | | |
| Skin sensitization | Based on available data, the classification criteria are not met. | | |
| Germ cell mutagenicity | Based on available data, the classification criteria are not met. | | |
| Carcinogenicity | This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA. | | |
| IARC Monographs. Overall Evaluation of Carcinogenicity | | | |
| Not listed. | | | |

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

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 | Based on available data, the classification criteria are not met. |
| 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. Prolonged exposure may cause chronic effects. |

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 |
|----------------------------------|---------|---|
| 2,2'-Oxydiethanol (CAS 111-46-6) | | |
| Aquatic | | |
| Fish | LC50 | Western mosquitofish (<i>Gambusia affinis</i>) > 32000 mg/l, 96 hours |
| ETHYLENE GLYCOL (CAS 107-21-1) | | |
| Aquatic | | |
| Fish | LC50 | Fathead minnow (<i>Pimephales promelas</i>) 8050 mg/l, 96 hours |

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 |

Mobility in soil No data available. This product is miscible in water and may not disperse in soil.

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)

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.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

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 | 90.5 |

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 06-15-2020
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