



Material Safety Data Sheet

FIR No.: 145669
Version Number: CA-EN-6

Level: 1
Release Date: 2010-03-25

1. Product and Company Identification

Product Name: R-134a Leak Detection Dye
Product Code: See Attachment
Application: R-134a A/C Refrigerant Leak Detection Dye
Supplier: Ford Motor Company of Canada
 Oakville, Ontario L6J 5E4
 1-800-392-3673

Emergency Telephone: Poison Control Center: 1-800-959-3673
 CHEMTREC: U.S. and Canada: 1-800-424-9300
 CHEMTREC: International: 1-703-527-3887

2. Composition/Information on Ingredients

This chemical product is a preparation.

Chemical Name	CAS Number	Percent Concentration	Hazard Classification
N-METHYLPYRROLIDONE	872-50-4	30-60	SARA 313

3. Hazards Identification

WARNING

Health: This product may cause irritation to the respiratory system and skin. This product is irritating to the eyes. Ingestion of this product may cause nausea, vomiting and diarrhea. This product may be harmful if it is swallowed. This product may cause sensitization by inhalation.

Physical and Chemical Hazards: This product is combustible at high temperatures.

4. First-Aid Measures

Inhalation: If gas/fume/vapor/dust/mist from the material is inhaled, remove the affected person immediately to fresh air. If irritation persists, get medical attention.

Skin Contact: Wash skin with soap and water. If irritation persists, get medical attention.

Eye Contact: In case of contact with eyes, rinse immediately with plenty of water for at least 15 minutes and seek medical attention. If irritation persists, get medical attention.

Ingestion: If the material is swallowed, do not induce vomiting. Get immediate medical attention or advice -- give several glasses of water or milk. Do not give anything by mouth to an unconscious or convulsing person.



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5. Fire-Fighting Measures

Extinguishing Media: EXTINGUISHER INFORMATION: Dry chemical, foam, carbon dioxide, water fog.

Specific Methods: Water may be used to cool exposed containers to prevent pressure build-up and explosion when exposed to extreme heat.

Specific Hazards: Due to pressure buildup, closed containers exposed to excess heat may explode.
Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.
This product may emit toxic/irritating fumes or gases upon heating to high temperatures.

Protection of Firefighters: Fire fighters should be equipped with NIOSH-approved, self-contained breathing apparatus (SCBA) and full protective clothing.

6. Accidental Release Measures

Personal Precautions: Avoid inhalation of vapors and contact with skin and eyes.

Environmental Precautions: Do not allow the spilled product to enter public drainage system or open water courses.

Methods for Cleaning Up: Dike the spilled material, where this is possible.
Absorb the spilled material with an inert absorbent (nonflammable) material.

7. Handling and Storage

Handling:

Technical Measures: Keep this product from heat, sparks, or open flame.

Precautions and Advice for Safe Handling: Avoid breathing vapor or mist.
Avoid eye contact.
Keep the container closed when not in use.

Storage: Technical Measures: No special precautions.

Storage Conditions: Store in a cool, well-ventilated area away from incompatibles.
Keep away from children.



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8. Exposure Controls/Personal Protection

Engineering Measures:

Eyewash and emergency showers are recommended.
ENGINEERING CONTROL: 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, local exhaust ventilation, or other engineering controls to control airborne levels below the recommended exposure limits/guidelines.

Personal Protective Equipment:

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.

Hand Protection:

Use of impervious gloves is recommended, such as neoprene.

Eye Protection:

Wear safety glasses with side shields.
Wear chemical goggles; face shield (if splashing is possible).

Skin and Body Protection:

Remove contaminated clothing and wash before reuse.

Hygiene Measures:

Use good personal hygiene.



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9. Physical and Chemical Properties

Specific Gravity: 1.054 H₂O=1
Physical State: LIQUID
Odor: MILD
Color: DEEP AMBER
pH: ND
Temperature Range During which Changes in Physical State Occur:
 Boiling Point: +95 °C
 Freezing Point: N.AV
Flash Point: >93.3 °C CLOSED CUP
Auto-ignition Temperature: N.AV
Explosion Properties:
 UEL: N.AV
 LEL: N.AV
Vapor Pressure: 0.29@20°C mmHg
Vapor Density: 3.04 (AIR = 1)
Solubility: MISCIBLE
Viscosity: 24 to 40 cps Viscometer
Evaporation Rate: <1 Water = 1

10. Stability and Reactivity

Stability: This is a stable material.
 Hazardous polymerization will not occur.

Conditions and Materials to Avoid: This product may react with oxidizing agents.
 This product may react with strong acids.

Hazardous Decomposition Products: Carbon monoxide, carbon dioxide, and other low molecular weight hydrocarbons.
 Irritating and toxic gases or fumes may be released during a fire.



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11. Toxicological Information

- 9038-95-3 ETHYLENE OXIDE-PROPYLENE OXIDE COPOLYMER MONOBUTYL ETHER
Oral, adult rat, LD50 = 12 gm/kg
- 872-50-4 N-METHYLPYRROLIDONE
Oral, adult rat, LD50 = 3914 mg/kg
- 9038-95-3 ETHYLENE OXIDE-PROPYLENE OXIDE COPOLYMER MONOBUTYL ETHER
Skin, adult rabbit, LD50 = 14 gm/kg
- 872-50-4 N-METHYLPYRROLIDONE
Skin, adult rabbit, LD50 = 8000 mg/kg

Inhalation: Vapor overexposure may cause respiratory tract irritation.

Skin Contact: Prolonged and/or repeated skin contact with this product may cause irritation/dermatitis.

Chronic (Long Term) Toxicity: Oral administration of methylpyrrolidone at 500 mg/kg/d in pregnant rats resulted in embryonic loss and fetal malformations.

12. Ecological Information

No specific aquatic data available for this product.

13. Disposal Considerations

Waste from Residues: Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulation.

Contaminated Packaging: No available information.



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14. Transport Information

U.S. Department of Transportation (DOT) 49 - CFR 172.101

This product is not regulated as a dangerous good.

Canadian Transportation of Dangerous Goods (T.D.G.) - TDGR Schedule II

This product is not regulated as a dangerous good.

Secretary of Communication and Transportation (SCT) - NOM-002-SCT2/1994 (Mexico)

This product is not regulated as a dangerous good.

International and Domestic Air Transportation - ICAO & IATA Section 4.2

This product is not regulated as a dangerous good.

International Water Transportation - IMDG Code Amendment 31-02

This product is not regulated as a dangerous good.

15. Regulatory Information

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

CLASS D DIVISION 2 SUBDIVISION A: Poisonous/Infectious Material Causing Other Toxic Effects - Very Toxic Material

CLASS D DIVISION 2 SUBDIVISION B: Poisonous/Infectious Material Causing Other Toxic Effects - Toxic Material

16. Other Information

Key/Legend: N.AP = Not applicable; N.AV = Not available; ND = Not determined or No data; TLV = Threshold limit value; TWA = Time-weighted average; STEL = Short-term exposure limit; C = Ceiling limit

The following sections contain revisions OR 2
NEW statements. 15

Preparation Information:

The chemical identification and properties for this material were provided by the manufacturer. For Canadian locations, a manufacture's MSDS is available upon request. Health and safety information has been evaluated by the Occupational and Environmental Health Sciences Department, Ford Motor Company, Diagnostic Service Center II, 1800 Fairlane Drive, Allen Park, MI 48101, USA.

Disclaimer:

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.



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Attachment

Product Code	Container Size	Part of Kit	Kit Product Code
164-R6060	12 - 0.25 fl oz (7.4 mL) vials		
164-R6080	8 fl oz (237 mL) bottle		