

MATERIAL SAFETY DATA SHEET

Trade Name: Castrol R-134a Ester Oil Charge with UV Dye
MSDS NO. 6716
Revision Date: 04/02/2002

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Trade Name: Castrol R-134a Ester Oil Charge with UV Dye
Chemical Family: Refrigerant gas/lubricant
Synonyms: None
Emergency Telephone (24 hr.): CHEMTREC 1-800-424-9300
Supplier:
Technical Chemical Company, P.O. Box 139, Cleburne, Texas 76033

2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient/CAS No.	wt. %	OSHA PEL TWA	OSHA PEL Ceiling Limits	ACGIH TLV TWA	ACGIH TLV STEL
1,1,1,2-Tetrafluoroethane 811-97-2	45 - 85	Not Known (Recommended <1000 ppm TWA)	Not Known	Not Known	Not Known
Polyol Esters NA	45-55	None Established	None Established	None Established	None Established
Air Conditioning Dye Fluorescent Yellow NA	0-8	Not Known	Not Known	Not Known	Not Known

Contains no other ingredients in concentrations >.1% that are now known to be hazardous as defined by OSHA.

3. HAZARDS IDENTIFICATION

Emergency Overview: Content under pressure. "Frostbite-like" effects may occur if the liquid or escaping vapors contact the eyes or skin. Gross inhalation overexposure may cause: Central nervous system depression with dizziness, confusion, incoordination, drowsiness or unconsciousness or death. Keep away from heat, sparks and flame.

4. FIRST AID MEASURES

Eye Contact: In case of contact, or suspected contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention immediately after flushing.

Ingestion: If swallowed, give at least 3-4 glasses of water, but do not induce vomiting. Do not give anything by mouth to an unconscious or convulsing person. Get medical attention. Physician: The liquid portion of this material is considered to be only slightly toxic. The potential complications associated with removing material from the GI track, the amount digested, and the time since ingestion should be taken into account when developing a treatment plan. This material also contains 134a, which is a gas at ambient temperatures.

Inhalation: If inhaled, remove to fresh air. If not breathing give artificial respiration, preferably mouth-to-mouth. If breathing is difficult give oxygen. Get medical attention.

Skin Contact: In case of contact, immediately flush skin with plenty of soap and water for at least 15 minutes. Get medical attention. Remove contaminated clothing and launder before reuse. Use approved skin lotions or creams to replace lost skin oils. Treat for frostbite if necessary by gently warming affected area.

5. FIRE FIGHTING MEASURES

Flammable Properties

Flash Point °F(°C): >95 C (Lowest Component)
Flash Point Method: TAG Closed Cup
Flammable Limits in Air - Lower (%): Not Determined
Flammable Limits in Air - Upper (%): Not Determined
Autoignition Temperature °F(°C): Not Determined
Extinguishing Media: Carbon Dioxide, Dry Chemicals, Foam. If water is used, use with care to avoid possible violent production of steam. Use water spray to keep containers cool that are exposed to heat or flames.

Protection Of Fire-Fighters:

Special Fire-Fighting Procedures: Warning!! Contents under pressure. Container may rupture under fire conditions. Decomposition may occur. Wear approved positive-pressure self-contained breathing apparatus and protective clothing.

Hazardous Combustion Products: Carbon Dioxide. Carbon Monoxide. Fumes and Smoke.
Aerosol Comments: NFPA Level 1 Aerosol

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Wear appropriate protective clothing and equipment to prevent skin and eye contact.
Spill Procedures: Wear protective equipment specified. Contain any liquid from leaking containers. Ventilate spill area. Soak up material with absorbent and place in chemical waste container.
 Increase area ventilation. Do not puncture or incinerate container. Contents under pressure.
Environmental Precautions: Do not allow to enter sanitary drains, sewer or surface and subsurface waters.

7. HANDLING AND STORAGE

Handling and Storage: CAUTION: COMPRESSED GAS. Do not puncture, incinerate or store above 120 F. Do not store in passenger compartment of automobile. Avoid breathing vapors, if exposed to high vapor concentration, leave area at once. Avoid contact with skin and eyes. Should not be mixed with air for leak testing or used for any other purpose above atmospheric pressure.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: Local exhaust ventilation as necessary to maintain exposures to within applicable limits. Showers. Eyewash stations.
Eyes: Wear safety glasses or goggles to protect against exposure.
Skin Protection: Avoid skin contact. Wear protective clothing and gloves.
Respiratory Protection: Use in a well ventilated area.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Colorless gas with clear to yellow liquid. Colorless gas with yellow/green liquid.
Odor: MILD ETHER LIKE **pH Value:** Not Determined
Vapor Pressure: Not Determined **Vapor Density (Air=1):** Not Determined
Boiling Point (°F): -15.7 F. (Lowest Component) **Melting/Freezing Point:** Not determined.
Solubility in Water: NEGLIGIBLE **Bulk Density at 20°C:** Not Determined
Molecular Weight: Mixture **Evaporation Rate:** >1
Viscosity: Not determined. **Specific Gravity (H20=1):** Not determined.
VOC Content(%): Not determined. **Decomposition Temperature:** Not Known

10. STABILITY AND REACTIVITY

Chemical Stability: Stable under normal temperatures and pressures.
Conditions to Avoid: Do not expose to heat or store at temperatures above 120°f.
Materials to Avoid: Avoid contact with acidic, basic or oxidizing agents. Avoid contact with alkali or alkaline earth metals.
Hazardous Decomposition Products: Carbon monoxide. Carbon dioxide. Hydrogen chloride. Hydrogen fluoride Chlorine.
Hazardous Polymerization: WILL NOT OCCUR

11. TOXICOLOGICAL INFORMATION

Toxicological Data:

Ingredient/CAS No.	wt. %	Route	Species	Dose
1,1,1,2-Tetrafluoroethane 811-97-2	45 - 85	Inhalation	Rats	LC50 1500 gm/m3/4H
Polyol Esters NA	45-55	Oral	Rats	LD50 >2000 mg/kg
Air Conditioning Dye Fluorescent Yellow NA	0-8	NA	NA	Not Known

Carcinogenicity:

Ingredient/CAS No.	wt. %	IARC	NTP	OSHA
1,1,1,2-Tetrafluoroethane 811-97-2	45 - 85	Not Listed	Not Listed	Not Listed
Polyol Esters NA	45-55	Not Listed	Not Listed	Not Listed
Air Conditioning Dye Fluorescent Yellow NA	0-8	Not Listed	Not Listed	Not Listed

12. ECOLOGICAL INFORMATION

Ecological testing has not been conducted on this product.

13. DISPOSAL CONSIDERATION

Waste Classification: Not determined.

Waste Management: Not determined.

Disposal should be made in accordance with federal, state and local regulations.

14. TRANSPORTATION INFORMATION

U.S. DOT:

Proper Shipping Name: Consumer Commodity ORMD
Hazard Class: ORMD
UN/NA Number: NA
DOT Packing Group: NA

IMDG:

Proper Shipping Name: 1,1,1,2-Tetrafluoroethane
Hazard Class: 2.2 (Limited Quantities)
Hazard Subclass: Not determined.
UN No.: UN 3159
Packing Group: NA
Marine Pollutant: No

15. REGULATORY INFORMATION

US Federal Regulations:

Ingredient/CAS No.	wt. %	SARA 313	SARA 302	RQ	TPQ
1,1,1,2-Tetrafluoroethane 811-97-2	45 - 85	Not Listed	Not Listed	NA	NA
Polyol Esters NA	45-55	Not Listed	Not Listed	NA	NA
Air Conditioning Dye Fluorescent Yellow NA	0-8	Not Known	Not Known	NA	NA

SARA 311/312 Hazard Categories: Not Determined.

State Regulations:

Ingredient/CAS No.	wt. %	California Prop. 65 Cancer list	California Prop. 65 Developmental Toxicity	California Prop. 65 Reproductive Female	California Prop. 65 Reproductive Male
1,1,1,2-Tetrafluoroethane 811-97-2	45 - 85	Not Listed	Not Listed	Not Listed	Not Listed
Polyol Esters NA	45-55	Not Listed	Not Listed	Not Listed	Not Listed
Air Conditioning Dye Fluorescent Yellow NA	0-8	Not Listed	Not Known	Not Known	Not Known

U.S. TSCA:

The components of this product are listed on the TSCA Inventory.

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16. OTHER INFORMATION

General Notes: Do not allow undiluted material or large quantities to reach groundwater, bodies of water or sewer system.

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