

Material Safety Data Sheet

IDENTIFICATION

Name Cooltop R-134a Replacement Refrigerant

Chemical Family Halogenated Alkane

Formula: C3H7/ CH3CHF2/ CHF2CF3/ CH2FCF3

Mixture of: 1,1-difluoroethane/ pentafluoroethane/ 1, 1, 1, 2-tetrafluoroethane

Synonyms: R-134a/ tetrafluoroethane/ difluoroethane/ Freon 152a/ Genetron-125/ Cooltop

CAS Name: **CAS Registry Number**

Pentafluoroethane 354-33-6

1,1-difluoroethane 75-37-6

1,1,1,2-tetrafluoroethane 811-97-2

Manufacturer

Peoples Welding Supply, Inc.

426 Brown St. Levee

W. Lafayette, IN 47906

(800)-345-6942

Emergency phone (24hr) (800)-535-5053

Distributor

ATC Specialists, Inc.

1001 S. Walnut St.

Bloomington, IN 47401

(800)-622-5008

PHYSICAL DATA

Boiling (bubble) Point: About -30° F Percent Volatile by Vol.: 100

Boiling (dew) Point: About -20°F Mol. Wt.: about 100

Density (liquid 70°F) N/A Pressure: 115 PSIA @ 70°F

Vapor Density (Air =1): @ 70°F 5.7 Solubility in H2O: Slight

pH Information: Neutral Freezing Pt.: Not Established

Bubble Point (cylinder Pressure) @ 70°F 97.3 PSIG

Bubble Point (cylinder pressure) @ 130°F 248 PSIG

Appearance and Odor

Colorless liquefied gas with faint ethereal odor.

HAZARDOUS COMPONENTS

Material (s): Approximate Weight %.

1,1-difluoroethane (R-152a) 25

1,1,1,2-tetrafluoroethane (R-134a) 40

Pentafluoroethane (R-125) 35

HAZARDOUS REACTIVITY

Stability: Material is stable. However, avoid open flames and high temperatures.

Incompatibility (material to avoid) Strong oxidants including O₂.

Freshly scraped aluminum, Alkali metals and alkali Earth metals (sodium, magnesium, etc.....) may cause exothermic reaction. Aluminum in refrigeration systems contains a oxide coating, so it does not react.

Hazardous decomposition products:

May decompose at high temperatures (above 400-500°F) and from contact with hot metal, heating elements, pilot lights, internal combustion engines and open flames. Decomposition products may include hydrofluoric acid, fluorides, carbonyl halides, carbon dioxide, and carbon monoxide.

Polymerization: Will not occur.

FIRE AND EXPLOSION DATA

Flash point: NONE

Auto ignition temperature: 400°F or higher.

Fire and explosion: Product is nonflammable as blended. After worst case fractionation (vapor leakage) product may be slightly flammable, but does not sustain combustion when the ignition source is removed. Cylinders of product recovered from refrigeration system, may contain oil and may be flammable due to dissolved oils. Cylinders may vent or rupture in fire conditions, leading decomposition.

Extinguishing media: Water spray.

Special fire fighting instructions:

Use self contained apparatus. Use water spray to cool cylinders to prevent bursting or venting under fire conditions. Product may be flammable if mixed with large quantities of air at greater than atmospheric pressure.

Cylinders of used refrigerant, may contain large amounts of refrigeration oil. A liquid leak or cylinder venting in a fire will bring out a cloud of mist. This oil mist can be very flammable, in the order of gasoline.

HEALTH HAZARD INFORMATION

Principal Health hazards:

Inhalation: Vapor is heavier than air and can cause suffocation by displacing oxygen available for breathing. Contact with liquid may cause frostbite.

Breathing high concentrations of vapor may cause light headaches, giddiness, shortness of breath, and may lead to narcosis, cardiac irregularities, unconsciousness or death. May cause eye irritation.

Toxicity/ Exposure limits

OSHA and ACGIH: Not established, but recommended. TWA 1000 ppm.

Pentafluoroethane: Low acute toxicity on animal. Cardiac sensitization at high levels of exposure.

Difluoroethane: Cardiac sensitization accrued in dogs exposed to 150,000 ppm air.

Tetra fluoroethane: TWA 1000ppm.

FIRST AID

Inhalation: Remove to fresh air, call a physician. If not breathing, give artificial respiration. If breathing is difficult, do not give epinephrine or similar drugs. Note to physician: Because of possible increased risk of eliciting cardiac dysrhythmias, catecholamine drugs, such as epinephrine, should be considered only as a last resort in life threatening emergencies.

Eyes: Flush with water for at least 15 minutes. Call a physician.

Skin: Flush with water, warm slowly (cool water) if frostbite. Call a physician.

PRECAUTIONS PROCEDURES

Spill or leak:

Using a self contained air supply and frostbite protection, personnel should attempt to close valves or repair the source of the leak, if it is safely possible to do so. If large quantity is released, evacuate personnel, and allow to dissipate.

SHIPPING INFORMATION

Proper shipping name: Compressed Gases NOS UN 1956

DOT Placard: Nonflammable Gas

REGULATORY INFORMATION

- 1. The SNUR applies to any person (company) who intends to manufacture, import, or process the product (pentafluoroethane component) for commercial purposes.
- 2. SNUR Record keeping
 - The following records must be maintained for five years following their date of creation:
 - a. Records documenting the volumes of manufacture or export.
 - b. Records documenting the volumes of the substance purchased in the United States, the dates of purchase, and the names and addresses of suppliers.
 - c. Records documenting the names and addresses of all persons to whom the manufacturer, importer, or processor sells or transfers the substance, and the date and volume of each sale or transfer.
 - d. Records documenting compliance with any restrictions.
- 3. SNUR use restrictions
 - The product may not be used in aerosol products intended for consumer use. This restriction does not apply to the use of the substance in fire extinguishing apparatus or systems.
 - Pentafluoroethane falls under SNUR: HFC125-40CFR SECTION 721.3240

WARNING: Do not vent to the atmosphere. To comply to the provisions of the US Clean Air Act, any residual refrigerant must be recovered.

Date revised: 1/25/01

Person Responsible:

- George Goble
- Peoples Welding Supply
- 426 Brown St. Levee
- Lafayette, IN 47906
- 765-743-3839