

SECTION 1: Identification

1.1. Identification

Product form : Substance
 Trade name : ZeroR Generic R-134a Refrigerant
 Chemical name : 1,1,1,2-Tetrafluoroethane
 CAS No : 811-97-2
 Product code : ZeroR Generic

1.2. Recommended use and restrictions on use

Use of the substance/mixture : R-134a Refrigerant
 Use of the substance/mixture : Refrigerant gas

1.3. Supplier

DiY Parts, Inc.
 3503 Holts Chapel Road
 Greensboro, NC 27401
www.diyparts.com

1.4. Emergency telephone number

Emergency number : USA PHONE:1-800-373-7542, INT'L: 1-484-951-2432
 DGA/AAG ENVIRONMENTAL CONTRACT: DGA4000-048

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

Not classified

2.2. GHS Label elements, including precautionary statements

GHS-US labelling

Hazard pictograms (GHS-US) :



GHS04

Signal word (GHS-US) : Warning
 Hazard statements (GHS-US) : H280 - Contains gas under pressure; may explode if heated
 H281 - Contains refrigerated gas; may cause cryogenic burns or injury
 H312 - Harmful in contact with skin
 Precautionary statements (GHS-US) : P412 - Do not expose to temperatures exceeding 50 °C/ 122 °F
 P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

2.3. Other hazards which do not result in classification

Other hazards not contributing to the classification : Contains gas under pressure; may burst if heated.

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substances

Name : ZeroR Generic R-134a Refrigerant
 CAS No : 811-97-2

Name	Product identifier	%	GHS-US classification
1,1,1,2-tetrafluoroethane (Main constituent)	(CAS No) 811-97-2	80 - 90	Not classified

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Full text of hazard classes and H-statements : see section 16

3.2. Mixtures

Not applicable

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general	: Content under pressure. "Frostbite-like" effects may occur if the liquid or escaping vapors contact the eyes or skin. Gross inhalation over exposure may cause: Central nervous system depression with dizziness, confusion, incoordination, drowsiness or unconsciousness or death. Vomiting: prevent asphyxia/aspiration pneumonia. Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation	: Assure fresh air breathing. Allow the victim to rest.
First-aid measures after skin contact	: Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.
First-aid measures after eye contact	: Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists.
First-aid measures after ingestion	: Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/injuries	: Not expected to present a significant hazard under anticipated conditions of normal use.
Symptoms/injuries after inhalation	: Central nervous system depression. Dizziness. Mental confusion.

4.3. Immediate medical attention and special treatment, if necessary

No additional information available

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media	: Foam. Dry powder. Carbon dioxide. Water spray. Sand.
Unsuitable extinguishing media	: Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

No additional information available

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions	: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Warning!! Contents under pressure. Container may rupture under fire conditions. Decomposition may occur. Wear approved positive-pressure self-contained breathing apparatus and protective clothing.
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6.1.1. For non-emergency personnel

Protective equipment	: Wear appropriate protective clothing and equipment to prevent skin and eye contact.
Emergency procedures	: Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment	: Equip cleanup crew with proper protection.
Emergency procedures	: Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment	: Increase area ventilation. Do not puncture or incinerate container. Contents under pressure.
Methods for cleaning up	: Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : 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. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Do not store above 120°F. Keep container closed when not in use.
Incompatible products : Strong bases. Strong acids.
Incompatible materials : Sources of ignition. Direct sunlight.
Storage temperature : < 49 °C Do not store in passenger compartment of automobiles.
Storage area : Store in a dry area. Store in a cool area.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

1,1,1,2-tetrafluoroethane (811-97-2)

Not applicable

8.2. Appropriate engineering controls

Appropriate engineering controls : Local exhaust ventilation as necessary to maintain exposures to within applicable limits. Showers. Eyewash stations.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Avoid all unnecessary exposure.

Hand protection:

Insulated gloves. Wear protective gloves

Eye protection:

Safety glasses. Safety glasses. Wear safety glasses or goggles to protect against exposure. Chemical goggles or safety glasses

Skin and body protection:

Avoid skin contact. Wear protective clothing and gloves.

Respiratory protection:

Use in a well ventilated area. Wear appropriate mask

Other information:

Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid
Appearance : Liquefied compressed gas.
Colour : Colourless
Odour : Characteristic
Odour threshold : No data available
pH : No data available
Melting point : No data available
Freezing point : No data available
Boiling point : -26.5 °C

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Flash point	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Flammability (solid, gas)	: Non flammable.
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Solubility	: No data available
Log Pow	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive limits	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available

9.2. Other information

Gas group : Liquefied gas

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable under normal temperatures and pressures.

10.3. Possibility of hazardous reactions

Hazardous Polymerization: WILL NOT OCCUR.

10.4. Conditions to avoid

Do not expose to heat or store at temperatures above 120°F. Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

Carbon monoxide. Carbon Dioxide. This material can be decomposed by high temperatures forming hydrofluoric acid and possibly carbonyl fluoride.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

1,1,1,2-tetrafluoroethane (811-97-2)	
LC50 inhalation rat (mg/l)	> 2000 mg/l/4h (Rat; Literature study)
LC50 inhalation rat (ppm)	> 359300 ppm/4h (Rat; Literature study)

Skin corrosion/irritation : Not classified
Serious eye damage/irritation : Not classified
Respiratory or skin sensitisation : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified

Reproductive toxicity : Not classified
STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

Potential adverse human health effects and symptoms : Based on available data, the classification criteria are not met.

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Symptoms/injuries after inhalation : Central nervous system depression. Dizziness. Mental confusion.

SECTION 12: Ecological information

12.1. Toxicity

1,1,1,2-tetrafluoroethane (811-97-2)	
LC50 fish 1	450 mg/l (LC50; 96 h)
EC50 Daphnia 1	980 mg/l (EC50; 48 h)

12.2. Persistence and degradability

ZeroR Generic R-134a Refrigerant (811-97-2)	
Persistence and degradability	Not established.

1,1,1,2-tetrafluoroethane (811-97-2)	
Persistence and degradability	Not readily biodegradable in water.

12.3. Bioaccumulative potential

ZeroR Generic R-134a Refrigerant (811-97-2)	
Bioaccumulative potential	Not established.

1,1,1,2-tetrafluoroethane (811-97-2)	
BCF other aquatic organisms 1	5 - 58 (BCF)
Log Pow	1.06 (OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Effect on the global warming : No known effects from this product.

GWPmix comment : No known effects from this product.

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Disposal methods

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Proper Shipping Name (DOT) : 1,1,1,2-Tetrafluoroethane

Class (DOT) : 2.2 - Class 2.2 - Non-flammable compressed gas 49 CFR 173.115

Hazard labels (DOT) : 2.2 - Non-flammable gas



Other information : No supplementary information available.

Transportation of Dangerous Goods

Transport document description : 3159 1,1,1,2-Tetrafluoroethane, 2.2

UN-No. (TDG) : 3159

Proper Shipping Name (Transportation of Dangerous Goods) : 1,1,1,2-Tetrafluoroethane

TDG Primary Hazard Classes : 2.2 - Class 2.2 - Non-Flammable, Non-Toxic Gas.

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Transport by sea

Not applicable

Air transport

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

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Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA

ZeroR Generic R-134a Refrigerant (811-97-2)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

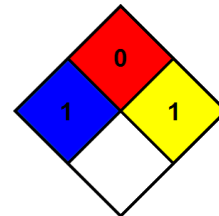
No additional information available

15.3. US State regulations

No additional information available

SECTION 16: Other information

- Other information : None.
- NFPA health hazard : 1 - Materials that, under emergency conditions, can cause significant irritation.
- NFPA fire hazard : 0 - Materials that will not burn under typical dire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.
- NFPA reactivity : 1 - Materials that in themselves are normally stable but can become unstable at elevated temperatures and pressures.



SDS US (GHS HazCom 2012)

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