R134a 12 oz

Safety Data Sheet

according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012.
Issue date: 10/4/2023 Revision date: 10/4/2023 Version: 1.0

SECTION 1: Identification

1.1. Identification

Product form	:	Substance
Substance name	:	R134a 12 oz
Chemical name	:	1,1,1,2-Tetrafluoroethane
CAS-No.	:	811-97-2
Product code	:	BLA301

1.2. Recommended use and restrictions on use

Use of the substance/mixture	:	Automotive AC

1.3. Supplier

Supplier
AC Avalanche LLC
809 110th Street
Arlington, Texas 76011
USA
T 737-377-0194

1.4. Emergency telephone number

Emergency number	:	CHEMTREC 800-424-9300

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Gas Under Pressure (Liq.)	Contains gas under pressure; may explode if heated
Simple Asphy	May displace oxygen and cause rapid suffocation

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US) :

Signal word (GHS US)	:	Warning
Hazard statements (GHS US)	:	Contains gas under pressure; may explode if heated May displace oxygen and cause rapid suffocation
Precautionary statements (GHS US)	:	Protect from sunlight. Store in a well-ventilated place.

2.3. Other hazards which do not result in classification

Other hazards which do not result in classification	:	May cause frostbite. Exposure to high concentrations may cause an abnormal heart rhythm which can be fatal. Very high atmospheric concentrations may cause anesthetic effects such as drowsiness, dizziness, headaches and unconsciousness.

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Name : R134a 12 oz

CAS-No. : 811-97-2

Name	Product identifier	%
1,1,1,2-Tetrafluoroethane	CAS-No.: 811-97-2	100

3.2. Mixtures

Not applicable

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : If inhaled and if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Give oxygen or artificial respiration if necessary. Get medical advice/attention if you feel unwell.

First-aid measures after skin contact : If skin irritation occurs: Wash skin with plenty of water. Obtain medical attention if irritation persists.

First-aid measures after eye contact : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

First-aid measures after ingestion : Not expected to be a primary route of exposure. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Get medical advice/attention if you feel unwell.

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

Symptoms/effects after inhalation : May cause irritation to the respiratory tract. Vapors are heavier than air and can cause suffocation by reducing oxygen available for breathing. Symptoms of oxygen deficiency include respiratory difficulty, headache, dizziness, nausea, unconsciousness or death.

Symptoms/effects after skin contact : May cause skin irritation. Repeated exposure may cause skin dryness or cracking.

Symptoms/effects after eye contact : May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.

Symptoms/effects after ingestion : None under normal use. May be harmful if swallowed. May cause gastrointestinal irritation, nausea, vomiting and diarrhea.

4.3. Immediate medical attention and special treatment, if necessary

Symptoms may be delayed. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Use extinguishing media appropriate for surrounding fire.

Unsuitable extinguishing media : Do not use water jet.

5.2. Specific hazards arising from the chemical

Fire hazard : Products of combustion may include, and are not limited to: oxides of carbon. irritating vapors. Hydrogen fluoride.

Explosion hazard : Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries. Ruptured cylinders may rocket.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion.
Protection during firefighting : Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Isolate from fire, if possible, without unnecessary risk.

6.1.1. For non-emergency personnel

No additional information available

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

Prevent entry to sewers and public waters.

6.3. Methods and material for containment and cleaning up

For containment : Stop leak if safe to do so. Keep away from sources of ignition. Wear recommended personal protective equipment.
Methods for cleaning up : Provide ventilation.

6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection".

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Hazardous waste due to potential risk of explosion.
Precautions for safe handling : Do not pierce or burn, even after use. Keep away from sources of ignition - No smoking. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapors/spray. Do not swallow. Handle and open container with care. When using do not eat, drink or smoke. Use only outdoors or in a well-ventilated area.
Hygiene measures : Wash contaminated clothing before reuse. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep out of the reach of children. Keep container tightly closed. Store in a dry, cool and well-ventilated place. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F. Protect containers from physical damage.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

R134a 12 oz (811-97-2)
No additional information available

1,1,1,2-Tetrafluoroethane (811-97-2)	
USA - AIHA - Occupational Exposure Limits	
WEEL TWA [ppm]	1000 ppm

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.

Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:

Wear suitable gloves. Consult glove manufacturer's product information on material suitability and material thickness.

Eye protection:

Safety glasses or goggles are recommended when using product.

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. SDSs cannot provide detailed and complete respiratory protection guidelines. Selection of respiratory protection must be done by a qualified person who has assessed the work environment.

Other information:

Handle in accordance with good industrial hygiene and safety procedures. Do not eat, drink or smoke when using this product.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Gas
Appearance	:	Liquified Gas
Color	:	Colorless
Odor	:	Odorless
Odor threshold	:	No data available
pH	:	No data available
Melting point	:	-108 °C (-162.4 °F)
Freezing point	:	No data available
Boiling point	:	-26.2 °C (-15.2 °F)
Flash point	:	Does not flash.
Relative evaporation rate (butyl acetate=1)	:	No data available
Flammability (solid, gas)	:	No data available
Vapor pressure	:	4270 mm Hg (at 20 °C)
Relative vapor density at 20°C	:	3.6 (Air = 1)
Relative density	:	1.22 (at 20 °C)
Solubility	:	No data available
Partition coefficient n-octanol/water	:	1.06
Auto-ignition temperature	:	> 743 °C (> 1369 °F)
Decomposition temperature	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available
Explosion limits	:	No data available
Explosive properties	:	No data available

Oxidizing properties : No data available

9.2. Other information

Gas group : Press. Gas (Liq.)

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known under normal conditions of use.

10.2. Chemical stability

Stable under normal conditions. Contains gas under pressure; may explode if heated.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Heat. Incompatible materials. Sources of ignition.

10.5. Incompatible materials

Powdered metals. Alkali metals. Alkaline earth metals.

10.6. Hazardous decomposition products

May include, and are not limited to: oxides of carbon. irritating vapors. Hydrogen fluoride.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

1,1,1,2-Tetrafluoroethane (811-97-2)	
LC50 inhalation rat	1500 g/m³ (Exposure time: 4 h)

Skin corrosion/irritation : Not classified
Serious eye damage/irritation : Not classified
Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Not classified
STOT-single exposure : Not classified
STOT-repeated exposure : Not classified

1,1,1,2-Tetrafluoroethane (811-97-2)	
NOAEC (inhalation,rat,gas,90 days)	50000 ppm Animal: rat, Guideline: OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies)

Aspiration hazard : Not classified
Viscosity, kinematic : No data available
Symptoms/effects after inhalation : May cause irritation to the respiratory tract. Vapors are heavier than air and can cause suffocation by reducing oxygen available for breathing. Symptoms of oxygen deficiency include respiratory difficulty, headache, dizziness, nausea, unconsciousness or death.

Symptoms/effects after skin contact : May cause skin irritation. Repeated exposure may cause skin dryness or cracking.

Symptoms/effects after eye contact : May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.

Symptoms/effects after ingestion : None under normal use. May be harmful if swallowed. May cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Other information : Likely routes of exposure: ingestion, inhalation, skin and eye.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : May cause long-term adverse effects in the aquatic environment.

1,1,1,2-Tetrafluoroethane (811-97-2)	
LC50 - Fish [1]	450 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [semi-static])
EC50 72h - Algae [1]	> 118 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
EC50 72h - Algae [2]	> 114 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)

12.2. Persistence and degradability

R134a 12 oz (811-97-2)	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

R134a 12 oz (811-97-2)	
Partition coefficient n-octanol/water	1.06
Bioaccumulative potential	Not established.

1,1,1,2-Tetrafluoroethane (811-97-2)	
Partition coefficient n-octanol/water	1.06 (at 25 °C (at pH 6)

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.

Other information : No other effects known.

SECTION 13: Disposal considerations

13.1. Disposal methods

Product/Packaging disposal recommendations : Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation. Container under pressure. Do not drill or burn even after use.

Additional information : Hazardous waste due to potential risk of explosion.

SECTION 14: Transport information

In accordance with DOT

14.1. UN number

DOT NA No : UN3159

14.2. UN proper shipping name

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

14.3. Transport hazard class(es)

DOT

Transport hazard class(es) (DOT) : 2.2

Hazard labels (DOT) : 2.2

14.4. Packing group

Packing group (DOT) : Not applicable

14.5. Environmental hazards

Other information : No supplementary information available.

14.6. Special precautions for user

Special transport precautions : Do not handle until all safety precautions have been read and understood.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory.

15.2. International regulations

No additional information available

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

SECTION 16: Other information

according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012.

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Other information : None.

Prepared by : Nexreg Compliance Inc.
www.Nexreg.com

Full text of H-phrases	
Press. Gas (Liq.)	Gases under pressure Liquefied gas
Simple Asphy	Simple Asphyxiant

Safety Data Sheet (SDS), USA