

**SAFETY DATA SHEET****AC Pro Auto Air-Con Recharge (R-134a) 510g**

The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/758 (as amended).

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Product name AC Pro Auto Air-Con Recharge (R-134a) 510g

Product number EZ-134RFL

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses All in one solution, restores lost refrigerant and oil, contains leak sealer to help stop most common leaks in rubber hoses, gaskets and o-rings.

Uses advised against No specific uses advised against are identified.

1.3. Details of the supplier of the safety data sheet

Supplier Energizer Trading Ltd
Sword House
Totteridge Road
High Wycombe
HP13 6DG
UK
Tel: +44 845 602 1995
euregulatory@energizer.com

1.4. Emergency telephone number

Emergency telephone +44 1495 350234
Monday - Thursday: 0830 - 1700
Friday: 0830 - 1530

National emergency telephone number Product information has been submitted to the UK National Poisons Information Service (NPIS) and is accessible to medical health professionals.

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Classification (EC 1272/2008)**

Physical hazards Press. Gas (Liq.) - H280

Health hazards Not Classified

Environmental hazards Not Classified

Physicochemical Containers can burst violently or explode when heated, due to excessive pressure build-up.

2.2. Label elements

Hazard pictograms



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Signal word	Warning
Hazard statements	H280 Contains gas under pressure; may explode if heated.
Precautionary statements	P102 Keep out of reach of children. P410+P403 Protect from sunlight. Store in a well-ventilated place. P501 Dispose of contents/ container in accordance with national regulations.

2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

1,1,1,2-tetrafluoroethane		50 - 100%
CAS number: 811-97-2	EC number: 212-377-0	REACH registration number: 01-2119459374-33-XXXX
Substance with National workplace exposure limits.		
Classification Press. Gas (Liq.) - H280		

The full text for all hazard statements is displayed in Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information	Get medical attention if any discomfort continues. Show this Safety Data Sheet to the medical personnel.
Inhalation	Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Loosen tight clothing such as collar, tie or belt. Get medical attention if symptoms are severe or persist.
Ingestion	Rinse mouth thoroughly with water. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Do not induce vomiting unless under the direction of medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if any discomfort continues.
Skin contact	Remove contaminated clothing immediately and wash skin with soap and water. Continue to rinse for at least 15 minutes. Get medical attention if symptoms are severe or persist after washing.
Eye contact	Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if symptoms are severe or persist after washing.

4.2. Most important symptoms and effects, both acute and delayed

General information	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	Spray/mists may cause respiratory tract irritation.
Ingestion	Due to the physical nature of this product, exposure by this route is unlikely.
Skin contact	Repeated exposure may cause skin dryness or cracking.
Eye contact	May be slightly irritating to eyes. May cause discomfort.

4.3. Indication of any immediate medical attention and special treatment needed

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Notes for the doctor Treat symptomatically. Keep affected person under observation.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire-extinguishing media suitable for the surrounding fire.

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards Containers can burst violently or explode when heated, due to excessive pressure build-up. Bursting aerosol containers may be propelled from a fire at high speed. If aerosol cans are ruptured, care should be taken due to the rapid escape of the pressurised contents and propellant.

Hazardous combustion products Thermal decomposition or combustion products may include the following substances: Oxides of carbon. Toxic gases or vapours.

5.3. Advice for firefighters

Protective actions during firefighting Use water to keep fire exposed containers cool and disperse vapours.

Special protective equipment for firefighters Use protective equipment appropriate for surrounding materials. Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Firefighter's clothing conforming to European standard EN469 (including helmets, protective boots and gloves) will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Wear protective clothing as described in Section 8 of this safety data sheet. Evacuate area. No smoking, sparks, flames or other sources of ignition near spillage. Risk of explosion.

For non-emergency personnel No action shall be taken without appropriate training or involving any personal risk.

6.2. Environmental precautions

Environmental precautions Avoid discharge into drains or watercourses or onto the ground.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Wear protective clothing as described in Section 8 of this safety data sheet. No smoking, sparks, flames or other sources of ignition near spillage. Eliminate all ignition sources if safe to do so. Do not touch or walk into spilled material. Ventilate closed spaces before entering them. Use only non-sparking tools. Containers with collected spillage must be properly labelled with correct contents and hazard symbol.

6.4. Reference to other sections

Reference to other sections See Section 11 for additional information on health hazards. For waste disposal, see Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Read and follow manufacturer's recommendations. Keep away from heat, sparks and open flame. Provide adequate ventilation. Ground/bond container and receiving equipment. Keep away from heat, sparks and open flame.

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Advice on general occupational hygiene

Avoid contact with eyes and prolonged skin contact. Good personal hygiene procedures should be implemented. Wash hands and any other contaminated areas of the body with soap and water before leaving the work site. Do not eat, drink or smoke when using this product.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions

Store in a cool and well-ventilated place. Keep away from heat, sparks and open flame. Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F. Take precautionary measures against static discharges.

Storage class

Compressed gas storage.

7.3. Specific end use(s)

Specific end use(s)

The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure controls/Personal protection

8.1. Control parameters

Occupational exposure limits

1,1,1,2-tetrafluoroethane

Long-term exposure limit (8-hour TWA): WEL 1000 ppm 4240 mg/m³

WEL = Workplace Exposure Limit.

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

DNEL

Workers - Inhalation; Long term systemic effects: 13936 mg/m³
General population - Inhalation; Long term systemic effects: 2476 mg/m³

PNEC

Fresh water; 0.1 mg/l
marine water; 0.01 mg/l
STP; 73 mg/l
Sediment (Freshwater); 0.75 mg/kg

8.2. Exposure controls

Protective equipment



Appropriate engineering controls

Provide adequate ventilation. All handling should only take place in well-ventilated areas. Avoid inhalation of vapours and spray/mists. Use explosion-proof electrical, ventilating and lighting equipment.

Eye/face protection

Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. Unless the assessment indicates a higher degree of protection is required, the following protection should be worn: Wear tight-fitting, chemical splash goggles or face shield.

Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. The most suitable glove should be chosen in consultation with the glove supplier/manufacture, who can provide information about the breakthrough time of the glove material. Frequent changes are recommended.

Other skin and body protection

Wear appropriate clothing to prevent repeated or prolonged skin contact.

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Hygiene measures	Do not smoke in work area. Wash promptly with soap and water if skin becomes contaminated. Wash at the end of each work shift and before eating, smoking and using the toilet.
Respiratory protection	Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible. Ensure all respiratory protective equipment is suitable for its intended use and is 'CE'-marked.
Environmental exposure controls	Keep container tightly sealed when not in use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Colour	Amber.
Odour	Ether.
Odour threshold	Not determined.
pH	pH (concentrated solution): < 7
Melting point	Not relevant.
Initial boiling point and range	>65°C
Flash point	> 130°C
Evaporation rate	Not determined.
Evaporation factor	Not determined.
Flammability (solid, gas)	Not determined.
Upper/lower flammability or explosive limits	Not determined.
Vapour pressure	Not determined.
Vapour density	< 8
Relative density	1.01
Bulk density	Not determined.
Partition coefficient	Not determined.
Auto-ignition temperature	Not relevant.
Decomposition Temperature	Not relevant.
Viscosity	Not determined.
Explosive properties	Not considered to be explosive.
Oxidising properties	The mixture itself has not been tested but none of the ingredient substances meet the criteria for classification as oxidising.

9.2. Other information

Other information	No information required.
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SECTION 10: Stability and reactivity

10.1. Reactivity

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Reactivity Strong acids. Strong alkalis.

10.2. Chemical stability

Stability Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed storage conditions.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions Will not polymerise.

10.4. Conditions to avoid

Conditions to avoid Avoid exposing aerosol containers to high temperatures or direct sunlight. Avoid heat, flames and other sources of ignition. Avoid the accumulation of vapours in low or confined areas.
Pressurised container: may burst if heated

10.5. Incompatible materials

Materials to avoid No specific material or group of materials is likely to react with the product to produce a hazardous situation.

10.6. Hazardous decomposition products

Hazardous decomposition products Does not decompose when used and stored as recommended. Decomposition at ambient temperatures may generate the following substances: Carbon dioxide (CO₂). Carbon monoxide (CO). Acid smoke or fumes.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

Notes (oral LD₅₀) Based on available data the classification criteria are not met.

Acute toxicity - dermal

Notes (dermal LD₅₀) Based on available data the classification criteria are not met.

Acute toxicity - inhalation

Notes (inhalation LC₅₀) Based on available data the classification criteria are not met.

Skin corrosion/irritation

Skin corrosion/irritation Based on available data the classification criteria are not met.

Serious eye damage/irritation

Serious eye damage/irritation Based on available data the classification criteria are not met.

Respiratory sensitisation

Respiratory sensitisation Based on available data the classification criteria are not met.

Skin sensitisation

Skin sensitisation Based on available data the classification criteria are not met.

Germ cell mutagenicity

Genotoxicity - in vitro Based on available data the classification criteria are not met.

Genotoxicity - in vivo Based on available data the classification criteria are not met.

Carcinogenicity

Carcinogenicity Based on available data the classification criteria are not met.

Reproductive toxicity

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Reproductive toxicity - fertility Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure

STOT - single exposure Based on available data the classification criteria are not met.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Based on available data the classification criteria are not met.

Aspiration hazard

Aspiration hazard Not anticipated to present an aspiration hazard, based on chemical structure.

Toxicological information on ingredients.

1,1,1,2-tetrafluoroethane

Germ cell mutagenicity

Genotoxicity - in vitro Chromosome aberration: Negative. REACH dossier information.

Genotoxicity - in vivo DNA damage and/or repair: Negative. REACH dossier information.

Carcinogenicity

Carcinogenicity NOEL 10000 ppm, Inhalation, Rat REACH dossier information.

Reproductive toxicity

Reproductive toxicity - fertility One-generation study - NOEL 50000 ppm, Inhalation, Mouse P REACH dossier information.

Reproductive toxicity - development Maternal toxicity: - NOEL: 2500 ppm, Inhalation, Rabbit REACH dossier information.

SECTION 12: Ecological information

12.1. Toxicity

Toxicity Not considered toxic to fish. However, large or frequent spills may have hazardous effects on the environment.

Ecological information on ingredients.

1,1,1,2-tetrafluoroethane

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 24 hours: 560 mg/l, Oncorhynchus mykiss (Rainbow trout)
LC₅₀, 48 hours: 450 mg/l, Oncorhynchus mykiss (Rainbow trout)
LC₅₀, 72 hours: 450 mg/l, Oncorhynchus mykiss (Rainbow trout)
LC₅₀, 96 hours: 450 mg/l, Oncorhynchus mykiss (Rainbow trout)
REACH dossier information.

Acute toxicity - aquatic invertebrates EC₅₀, 24 hours: 960 mg/l, Daphnia magna
EC₅₀, 48 hours: 980 mg/l, Daphnia magna
REACH dossier information.

Acute toxicity - microorganisms EC₁₀, EC₅₀, 6 hours: > 730 mg/l, Pseudomonas putida
REACH dossier information.

12.2. Persistence and degradability

Persistence and degradability There are no data on the degradability of this product.

Ecological information on ingredients.

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1,1,1,2-tetrafluoroethane

Biodegradation Water - Degradation (~3%): 28 days
REACH dossier information.
Degrades very slowly in nature.

12.3. Bioaccumulative potential

Bioaccumulative potential No data available on bioaccumulation.

Partition coefficient Not determined.

Ecological information on ingredients.

1,1,1,2-tetrafluoroethane

Partition coefficient log Pow: 1.06 REACH dossier information.

12.4. Mobility in soil

Mobility The product is partly soluble in water and may spread in the aquatic environment.

Ecological information on ingredients.

1,1,1,2-tetrafluoroethane

Henry's law constant 10220 Pa m³/mol @ 25°C REACH dossier information. Calculation method.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

Ecological information on ingredients.

1,1,1,2-tetrafluoroethane

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current EU criteria.

12.6. Other adverse effects

Other adverse effects Not determined.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information Dispose of waste product or used containers in accordance with local regulations Do not puncture or incinerate, even when empty.

SECTION 14: Transport information

14.1. UN number

UN No. (ADR/RID) 2037

UN No. (IMDG) 2037

UN No. (ICAO) 2037

UN No. (ADN) 2037

14.2. UN proper shipping name

Proper shipping name (ADR/RID) RECEPTACLES, SMALL, CONTAINING GAS (GAS CARTRIDGES)

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Proper shipping name (IMDG) RECEPTACLES, SMALL, CONTAINING GAS (GAS CARTRIDGES)

Proper shipping name (ICAO) RECEPTACLES, SMALL, CONTAINING GAS (GAS CARTRIDGES)

Proper shipping name (ADN) RECEPTACLES, SMALL, CONTAINING GAS (GAS CARTRIDGES)

14.3. Transport hazard class(es)

ADR/RID class 2.2

ADR/RID classification code 5A,5O

ADR/RID label 2.2

IMDG class 2.2

ICAO class/division 2.2

ADN class 2.2

Transport labels



14.4. Packing group

Not applicable.

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

No.

14.6. Special precautions for user

EmS F-D, S-U

ADR transport category 2

Tunnel restriction code (E)

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

Transport in bulk according to Not applicable.

**Annex II of MARPOL 73/78
and the IBC Code**

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulations EH40/2005 Workplace exposure limits.
The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (SI 2009 No. 1348) (as amended) ["CDG 2009"].
The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/758 (as amended).
The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use) (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/720 (as amended).

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EU legislation

Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).

Commission Regulation (EU) No 2015/830 of 28 May 2015.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

Abbreviations and acronyms used in the safety data sheet

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.
 RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.
 IMDG: International Maritime Dangerous Goods.
 IATA: International Air Transport Association.
 ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.
 ATE: Acute Toxicity Estimate.
 DNEL: Derived No Effect Level.
 LC₅₀: Lethal Concentration to 50 % of a test population.
 LD₅₀: Lethal Dose to 50% of a test population (Median Lethal Dose).
 PBT: Persistent, Bioaccumulative and Toxic substance.
 vPvB: Very Persistent and Very Bioaccumulative.
 BCF: Bioconcentration Factor.

Classification procedures according to Regulation (EC) 1272/2008

Press. Gas (Liq.) - H280: Expert judgement.

Revision comments

Product name change.

Revision date

11/11/2020

Revision

5

Supersedes date

19/03/2020

SDS number

589

Hazard statements in full

H280 Contains gas under pressure; may explode if heated.

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