# SAFETY DATA SHEET

## Chlorodifluoroethane (R142b)  
SDS_025_CLP

---

### 2.1: flammable gas.

## 1 Identification of the substance/mixture and of the company/undertaking

<table>
<thead>
<tr>
<th>Product identifier</th>
<th>Trade name</th>
<th>SDS Nr</th>
<th>Chemical description</th>
<th>CAS No</th>
<th>EC No</th>
<th>Index No</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Chlorodifluoroethane (R142b)</td>
<td>SDS_025_CLP</td>
<td>Chlorodifluoroethane (R142b)</td>
<td>000075-68-3</td>
<td>200-891-8</td>
<td>---</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chemical formula</th>
<th>Registration-No.</th>
<th>Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>C2H3ClF2 / CH3-CCIF2</td>
<td>Registration deadline not expired.</td>
<td>Industrial and professional. Perform risk assessment prior to use.</td>
</tr>
</tbody>
</table>

**Company identification**
- Air Liquide UK Ltd.
- Station Road
- Coleshill
- Birmingham B46 1JY United Kingdom

**E-Mail address (competent person):** David Hopper

**Emergency telephone number:** 01675 462695

## 2 Hazards identification

### Classification of the substance or mixture

**Hazard Class and Category Code**
- Regulation EC 1272/2008 (CLP)
  - Physical hazards: Flammable gases - Category 1 - Danger (H220)  
    Gases under pressure - Liquefied gas - Warning (H280)
  - Environmental hazards: Dangerous for the ozone layer. (EUH059 )

**Classification EC 67/548 or EC 1999/45**
- Not included in Annex VI.
- F++; R12
- N; R59

### Label elements

**Labelling Regulation EC 1272/2008 (CLP)**
2 Hazards identification (continued)

- Hazard pictograms

  ![Pictogram](image)

- Hazard pictograms code
  - GHS02 - GHS04

- Signal word
  - Danger

- Hazard statements
  - H220: Extremely flammable gas.
  - H280: Contains gas under pressure; may explode if heated.

- Supplemental hazard information
  - EUH059: Dangerous for the ozone layer.

- Precautionary statements
  - Prevention
    - P210: Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
    - P273: Avoid release to the environment.
  - Response
    - P377: Leaking gas fire: Do not extinguish, unless leak can be stopped safely.
    - P381: Eliminate all ignition sources if safe to do so.
  - Storage
    - P403: Store in a well-ventilated place.

Labelling EC 67/548 or EC 1999/45

- Symbol(s)
  - F+: Extremely flammable
  - N: Dangerous for the environment

- R Phrase(s)
  - R12: Extremely flammable.
  - R59: Dangerous for the ozone layer.

- S Phrase(s)
  - S9: Keep container in a well-ventilated place.
  - S16: Keep away from sources of ignition - No smoking.
  - S33: Take precautionary measures against static discharges.
  - S59: Refer to manufacturer/supplier for information on recovery/recycling.

Other hazards

Other hazards

3 Composition/information on ingredients

<table>
<thead>
<tr>
<th>Substance / Preparation</th>
<th>Substance</th>
<th>Contents</th>
<th>CAS No</th>
<th>EC No</th>
<th>Index No</th>
<th>Registration no</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlorodifluoroethane (R142b)</td>
<td>100 %</td>
<td>75-68-3</td>
<td>200-891-8</td>
<td>------</td>
<td>NOTE 2</td>
<td>F+; R12</td>
<td></td>
</tr>
</tbody>
</table>

Contains no other components or impurities which will influence the classification of the product.

Note 1: Listed in Annex IV / V REACH, exempted from registration.

Note 2: Registration deadline not expired.

Full text of R-phrases see chapter 16

Air Liquide UK Ltd.
Station Road    Coleshill  Birmingham  B46 1JY  United Kingdom
4 First aid measures

First aid measures
- Inhalation: In high concentrations may cause asphyxiation. Symptoms may include loss of mobility/consciousness. Victim may not be aware of asphyxiation. In low concentrations may cause narcotic effects. Symptoms may include dizziness, headache, nausea and loss of co-ordination. Remove victim to uncontaminated area wearing self contained breathing apparatus. Keep victim warm and rested. Call a doctor. Apply artificial respiration if breathing stopped.
- Skin/eye contact: For liquid spillage - flush with water for at least 15 minutes.
- Ingestion: Ingestion is not considered a potential route of exposure.

5 Fire-fighting measures

Specific hazards: Exposure to fire may cause containers to rupture/explode.
Hazardous combustion products: If involved in a fire the following toxic and/or corrosive fumes may be produced by thermal decomposition: Carbonyl fluoride. Carbon monoxide. Phosgene. Hydrogen chloride. Hydrogen fluoride.

Extinguishing media
- Suitable extinguishing media: All known extinguishants can be used.
- Specific methods: If possible, stop flow of product. Move away from the container and cool with water from a protected position. Do not extinguish a leaking gas flame unless absolutely necessary. Spontaneous/explosive re-ignition may occur. Extinguish any other fire.

Special protective equipment for fire fighters: Use self-contained breathing apparatus and chemically protective clothing.

6 Accidental release measures

Personal precautions: Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe. Evacuate area. Ensure adequate air ventilation. Eliminate ignition sources.

Environmental precautions: Try to stop release. Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous.

Clean up methods: Ventilate area.

7 Handling and storage

Handling: Suck back of water into the container must be prevented. Purge air from system before introducing gas. Do not allow backfeed into the container. Use only properly specified equipment which is suitable for this product, its supply pressure and temperature. Contact your gas supplier if in doubt. Keep away from ignition sources (including static discharges). Refer to supplier's container handling instructions. Take precautionary measures against static discharge.

Storage: Keep container below 50°C in a well ventilated place. Segregate from oxidant gases and other oxidants in store.
Chlorodifluoroethane (R142b)

8 Exposure controls/personal protection

Personal protection: Ensure adequate ventilation. Do not smoke while handling product.

9 Physical and chemical properties

Physical state at 20 °C: Gas.
Colour: Colourless.
Odour: Ethereal. Poor warning properties at low concentrations.
Molecular weight: 100.5
Melting point [°C]: -131
Boiling point [°C]: -9.6
Critical temperature [°C]: 137
Vapour pressure [20°C]: 2.9 bar
Relative density, gas (air=1): 3.7
Relative density, liquid (water=1): 1.2
Solubility in water [mg/l]: No reliable data available.
Flammability range [vol% in air]: 6.3 to 17.9
Auto-ignition temperature [°C]: 632
Other data: Gas/vapour heavier than air. May accumulate in confined spaces, particularly at or below ground level.

10 Stability and reactivity

Hazardous decomposition products: Thermal decomposition yields toxic products which can be corrosive in the presence of moisture.
Incompatible materials: Can form explosive mixture with air. May react violently with oxidants. Air, Oxidiser.
Conditions to avoid: Keep away from heat/sparks/open flames/hot surfaces. – No smoking. Heat.

11 Toxicological information

Acute toxicity: May cause irritation to the respiratory tract.

12 Ecological information

Effect on ozone layer: Covered by the 'Montreal Protocol'. May have damaging effect on ozone layer.
Ozone depletion factor [R11=1]: 0.065
Global warming potential [CO2=1]: 2310

13 Disposal considerations

General: Do not discharge into areas where there is a risk of forming an explosive mixture with air. Waste gas should be flared through a suitable burner with flash back arrestor. Toxic and corrosive gases formed during combustion should be scrubbed before
13 Disposal considerations (continued)

- discharge to atmosphere. 
  Do not discharge into any place where its accumulation could be dangerous. 
  Contact supplier if guidance is required. 
  Refer to supplier's waste gas recovery programme. 
  Must not be discharged to atmosphere.

14 Transport information

UN number : 2517
- Labelling ADR, IMDG, IATA

: 2.1 : flammable gas.

Land transport

ADR/RID

H.I. nr : 23
UN proper shipping name: 1-CHLORO-1,1-DIFLUOROETHANE (REFRIGERANT GAS R 142B)
Transport hazard class(es) : 2
- ADR/RID Classification code : 2 F
- Packing Instruction(s) - General : P200
- Tunnel Restriction : B/D Tank carriage: Passage forbidden through tunnels of category B, C, D and E; Other carriage: Passage forbidden through tunnels of category D and E

Sea transport

- IMO-IMDG code
- Proper shipping name : 1-CHLORO-1,1-DIFLUOROETHANE (REFRIGERANT GAS R 142B)
- Class : 2.1
- IMO Packing group : P200
- Emergency Schedule (EmS) - Fire : F-D
- Emergency Schedule (EmS) - Spillage : S-U
- Instructions - Packing : P200

Air transport

- ICAO/IATA
- Proper shipping name : 1-CHLORO-1,1-DIFLUOROETHANE (REFRIGERANT GAS R 142B)
- Class : 2.1
- Passenger and Cargo Aircraft :
- Cargo Aircraft only :
  - Packing instruction : 200

Avoid transport on vehicles where the load space is not separated from the driver's compartment. Ensure vehicle driver is aware of the potential hazards of the load and knows what to do in the event of an accident or an emergency.

Before transporting product containers:
14 Transport information (continued)

- Ensure that containers are firmly secured.
- Ensure cylinder valve is closed and not leaking.
- Ensure valve outlet cap nut or plug (where provided) is correctly fitted.
- Ensure valve protection device (where provided) is correctly fitted.
- Ensure there is adequate ventilation.
- Compliance with applicable regulations.

15 Regulatory information

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

Seveso regulation 96/82/EC: Listed

16 Other information

Ensure operators understand the flammability hazard.
The hazard of asphyxiation is often overlooked and must be stressed during operator training.

List of full text of R-phrases in section 3:

R12: Extremely flammable.
R59: Dangerous for the ozone layer.

This Safety Data Sheet has been established in accordance with the applicable European Directives and applies to all countries that have translated the Directives in their national laws.

DISCLAIMER OF LIABILITY:

Before using this product in any new process or experiment, a thorough material compatibility and safety study should be carried out.
Details given in this document are believed to be correct at the time of going to press. Whilst proper care has been taken in the preparation of this document, no liability for injury or damage resulting from its use can be accepted.

End of document