Hexafluoropropene (R1216)

Warning

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

Product identifier
- Trade name: Hexafluoropropene (R1216)
- SDS Nr: SDS_066_CLP
- Chemical description: Hexafluoropropene (R1216)
  - CAS No: 000116-15-4
  - EC No: 204-127-4
  - Index No: 602-061-00-4
- Chemical formula: C₃F₆
- Registration-No.: Registration deadline not expired.
- Use: Industrial and professional. Perform risk assessment prior to use.
- 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: Gases under pressure - Liquefied gas - Warning (H280)
- Health hazards: Acute toxicity, Inhalation - Category 4 - Warning (H332)
  - Specific Target Organ Toxicity - Single exposure - Respiratory tract irritation - Category 3 - Warning (H335)

Classification EC 67/548 or EC 1999/45: Xn; R20
  - Xi; R37

Label elements

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

- Hazard pictograms
  
  • Hazard pictograms code: GHS04 - GHS07
  • Signal word: Warning
  • Hazard statements:
    - H332: Harmful if inhaled.
    - H280: Contains gas under pressure; may explode if heated.
    - H335: May cause respiratory irritation.

- Precautionary statements
  - Prevention: P260: Do not breathe gas, vapours.
  - Storage: P403: Store in a well-ventilated place.

Labelling EC 67/548 or EC 1999/45

Symbol(s):

• Xn: Harmful

R Phrase(s):
• R20: Harmful by inhalation.
• R37: Irritating to respiratory system.

S Phrase(s):
• S41: In case of fire and/or explosion, do not breathe fumes.

Other hazards:

Other hazards: None.

3 Composition/information on ingredients

<table>
<thead>
<tr>
<th>Substance / Preparation: Substance.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Substance name</td>
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<tr>
<td>----------------</td>
</tr>
<tr>
<td>Hexafluoropropene (R1216)</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

4 First aid measures

First aid measures
  - Inhalation: Harmful by 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 equipment.

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4  First aid measures (continued)

apparatus. Keep victim warm and rested. Call a doctor. Apply artificial respiration if breathing stopped.

- Skin/eye contact
  : Immediately flush eyes thoroughly with water for at least 15 minutes. Obtain medical assistance. Remove contaminated clothing.

- 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: Carbon monoxide. Carbonyl fluoride. 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.

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

6  Accidental release measures

Personal precautions
  : Ensure adequate air ventilation. Use self-contained breathing apparatus and chemically protective clothing. Evacuate area.

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
  : Refer to supplier's container handling instructions. Use only properly specified equipment which is suitable for this product, its supply pressure and temperature. Contact your gas supplier if in doubt. Do not allow backfeed into the container. Suck back of water into the container must be prevented.

Storage
  : Keep container below 50°C in a well ventilated place.

8  Exposure controls/personal protection

Personal protection
  : Protect eyes, face and skin from liquid splashes. Keep self contained breathing apparatus readily available for emergency use. Do not smoke while handling product. Ensure adequate ventilation.

9  Physical and chemical properties

Physical state at 20 °C
  : Gas.
9 Physical and chemical properties (continued)

- **Colour**: Colourless gas.
- **Odour**: Ethereal.
- **Molecular weight**: 150
- **Melting point [°C]**: -156
- **Boiling point [°C]**: -29.6
- **Critical temperature [°C]**: 86.2
- **Vapour pressure [20°C]**: 6.4 bar
- **Relative density, gas (air=1)**: 5.2
- **Relative density, liquid (water=1)**: 1.3
- **Solubility in water [mg/l]**: No reliable data available.
- **Flammability range [vol% in air]**: Non flammable.
- **Auto-ignition temperature [°C]**: Not applicable.
- **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**: None.
- **Chemical stability**: Stable under normal conditions.

11 Toxicological information

- **Toxicity information**: May have damaging effect on respiratory system, central nervous system and liver.
- **Rat inhalation LC50 [ppm/4h]**: 2800

12 Ecological information

- **Ecological effects information**: May cause pH changes in aqueous ecological systems.
- **Global warming potential [CO2=1]**: 16800

13 Disposal considerations

- **General**: Do not discharge into any place where its accumulation could be dangerous. Avoid discharge to atmosphere. Contact supplier if guidance is required.

14 Transport information

- **UN number**: 1858
- **Labelling ADR, IMDG, IATA**: 2.2: Non flammable, non toxic gas.

**Land transport**

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14 Transport information (continued)

ADR/RID

H.I. nr: 20
UN proper shipping name: HEXAFLUOROPROPYLENE (REFRIGERANT GAS R 1216)
Transport hazard class(es): 2
- ADR/RID Classification code: 2 A
- Tunnel Restriction: C/E Tank carriage: Passage forbidden through tunnels of category C, D and E; Other carriage: Passage forbidden through tunnels of category E

Sea transport

- IMO-IMDG code
  - Proper shipping name: HEXAFLUOROPROPYLENE (REFRIGERANT GAS R 1216)
  - Class: 2.2
- IMO Packing group: P200
- Emergency Schedule (EmS) - Fire: F-C
- Emergency Schedule (EmS) - Spillage: S-V
- Instructions - Packing: P200

Air transport

- ICAO/IATA
  - Proper shipping name: HEXAFLUOROPROPYLENE (REFRIGERANT GAS R 1216)
  - Class: 2.2
- Passenger and Cargo Aircraft
  - Packing instruction: 200
- 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:
- 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:
- Ensure all national/local regulations are observed.
Seveso regulation 96/82/EC: Listed
16 Other information

Users of breathing apparatus must be trained.

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

- R20 : Harmful by inhalation.
- R37 : Irritating to respiratory system.

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:

- 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.
- Details given in this document are believed to be correct at the time of going to press. Before using this product in any new process or experiment, a thorough material compatibility and safety study should be carried out.