

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

Product name: REFRIGERANT R744
CAS number: 124-38-9
EINECS number: 204-696-9
Product code: R744
Synonyms: CARBON DIOXIDE
CO2

1.2. Relevant identified uses of the substance or mixture and uses advised against**1.3. Details of the supplier of the safety data sheet**

Company name: National Refrigerants Ltd
4 Watling Close
Sketchley Meadows Business Park
Hinckley
Leicestershire
LE10 3EZ
United Kingdom
Tel: 01455 630790
Fax: 01455 630791
Email: sds@nationalref.com

1.4. Emergency telephone number

Emergency tel: Carechem24 +44 (0)1865 407333

Section 2: Hazards identification**2.1. Classification of the substance or mixture**

Classification under CLP: Press. Gas: H280; -: EUH044

Most important adverse effects: Contains gas under pressure; may explode if heated. Risk of explosion if heated under confinement.

2.2. Label elements**Label elements:**

Hazard statements: H280: Contains gas under pressure; may explode if heated.

EUH044: Risk of explosion if heated under confinement.

Hazard pictograms: GHS04: Gas cylinder



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Signal words: Warning

Precautionary statements: P403: Store in a well-ventilated place.

P410: Protect from sunlight.

2.3. Other hazards

PBT: This product is not identified as a PBT/vPvB substance.

Section 3: Composition/information on ingredients

3.1. Substances

Chemical identity: REFRIGERANT R744

CAS number: 124-38-9

EINECS number: 204-696-9

Section 4: First aid measures

4.1. Description of first aid measures

Skin contact: Remove all contaminated clothes and footwear immediately unless stuck to skin.

Drench the affected skin with running water for 10 minutes or longer if substance is still on skin. Do not use hot water. If frostbite has occurred call a physician.

Eye contact: Bathe the eye with running water for 15 minutes. Transfer to hospital for specialist examination.

Ingestion: Not applicable.

Inhalation: Remove casualty from exposure ensuring one's own safety whilst doing so. If conscious, ensure the casualty sits or lies down. If unconscious and breathing is OK, place in the recovery position. If unconscious, check for breathing and apply artificial respiration if necessary. Consult a doctor.

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

Skin contact: Frost-bite may occur causing the affected area to become white and numb.

Eye contact: There may be severe pain. Corneal burns may occur. May cause permanent damage.

Ingestion: It is unlikely that this substance will be swallowed due to its physical properties.

Inhalation: Gas reduces oxygen available for breathing. Causes asphyxiation in high concentrations.

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

Section 5: Fire-fighting measures

5.1. Extinguishing media

Extinguishing media: Suitable extinguishing media for the surrounding fire should be used. Use water spray to cool containers.

5.2. Special hazards arising from the substance or mixture

Exposure hazards: Non flammable gas. Pressure build up. Fire or intense heat may cause violent rupture of packages.

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5.3. Advice for fire-fighters

Advice for fire-fighters: Wear self-contained breathing apparatus.

Section 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions: Ventilate the area, especially low or enclosed places where heavy vapours might collect. Vapours heavier than air and can cause suffocation by reducing oxygen available for breathing.

6.2. Environmental precautions

Environmental precautions: The product evaporates readily. Stop release if safe to do so. Prevent from entering sewers, basements and work pits, or any place where the accumulation can be dangerous.

6.3. Methods and material for containment and cleaning up

Clean-up procedures: Material evaporates. Ventilate the area, especially low or enclosed places where heavy vapours might collect.

6.4. Reference to other sections

Reference to other sections: Refer to section 8 of SDS.

Section 7: Handling and storage

7.1. Precautions for safe handling

Handling requirements: Ensure there is sufficient ventilation of the area. Do not handle in a confined space.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: Store in a cool, well ventilated area. Store at a temperature not exceeding 45°C.

Suitable packaging: Must only be kept in original packaging.

7.3. Specific end use(s)

Section 8: Exposure controls/personal protection

8.1. Control parameters

Workplace exposure limits: No data available.

DNEL/PNEC Values

DNEL / PNEC No data available.

8.2. Exposure controls

Engineering measures: Ensure there is sufficient ventilation of the area. Ensure there is exhaust ventilation of the area.

Respiratory protection: Respiratory protection not required. Self-contained breathing apparatus must be available in case of emergency.

[cont...]

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Hand protection: Protective gloves. The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection: Safety glasses with side-shields.

Skin protection: Protective clothing.

Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

State: Liquefied gas

Colour: Colourless

Odour: Odourless

Flammability limits %: lower: Not applicable.

upper: Not applicable.

Flash point°C: Not applicable.

9.2. Other information

Other information: No data available.

Section 10: Stability and reactivity

10.1. Reactivity

Reactivity: Stable under recommended transport or storage conditions.

10.2. Chemical stability

Chemical stability: Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous reactions: Hazardous reactions will not occur under normal transport or storage conditions.

10.4. Conditions to avoid

Conditions to avoid: Heat.

10.5. Incompatible materials

Materials to avoid: No data available.

10.6. Hazardous decomposition products

Section 11: Toxicological information

11.1. Information on toxicological effects

Toxicity values: No data available.

Symptoms / routes of exposure

Skin contact: Frost-bite may occur causing the affected area to become white and numb.

Eye contact: There may be severe pain. Corneal burns may occur. May cause permanent damage.

Ingestion: It is unlikely that this substance will be swallowed due to its physical properties.

Inhalation: Gas reduces oxygen available for breathing. Causes asphyxiation in high concentrations.

[cont...]

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Section 12: Ecological information

12.1. Toxicity

Ecotoxicity values: No data available.

12.2. Persistence and degradability

12.3. Bioaccumulative potential

12.4. Mobility in soil

12.5. Results of PBT and vPvB assessment

PBT identification: This product is not identified as a PBT/vPvB substance.

12.6. Other adverse effects

Section 13: Disposal considerations

13.1. Waste treatment methods

Disposal operations: Product evaporates.

Recovery operations: Not applicable.

Disposal of packaging: Return to supplier.

NB: The user's attention is drawn to the possible existence of regional or national regulations regarding disposal.

Section 14: Transport information

14.1. UN number

UN number: UN1013

14.2. UN proper shipping name

Shipping name: CARBON DIOXIDE

14.3. Transport hazard class(es)

Transport class: 2

14.4. Packing group

14.5. Environmental hazards

Environmentally hazardous: No

Marine pollutant: No

14.6. Special precautions for user

Tunnel code: C/E

Transport category: 3

Section 15: Regulatory information

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

15.2. Chemical Safety Assessment

Section 16: Other information

Other information

Other information: This safety data sheet is prepared in accordance with Commission Regulation (EU) No 2015/830.

* indicates text in the SDS which has changed since the last revision.

Phrases used in s.2 and s.3: EUH044: Risk of explosion if heated under confinement.

H280: Contains gas under pressure; may explode if heated.

Legal disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. This company shall not be held liable for any damage resulting from handling or from contact with the above product.