

Section 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier****Product name:** REFRIGERANT R290**Product code:** R290**Synonyms:** REFRIGERANT GRADE PROPANE**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:** Flam. Gas 1: H220; Press. Gas: H280**Most important adverse effects:** Extremely flammable gas. Contains gas under pressure; may explode if heated.**2.2. Label elements****Label elements:****Hazard statements:** H220: Extremely flammable gas.

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

Hazard pictograms: GHS02: Flame

GHS04: Gas cylinder

**Signal words:** Danger**Precautionary statements:** P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.

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No smoking.

P377: Leaking gas fire: Do not extinguish, unless leak can be stopped safely.

P381: Eliminate all ignition sources if safe to do so.

P403: Store in a well-ventilated place.

P410: Protect from sunlight.

2.3. Other hazards

Other hazards: In use, may form flammable / explosive vapour-air mixture.

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

Section 3: Composition/information on ingredients

3.2. Mixtures

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. Consult a doctor.

Ingestion: Not applicable.

Inhalation: Remove casualty from exposure ensuring one's own safety whilst doing so. 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: There may be redness or whiteness of the skin in the area of exposure. Frost-bite may occur causing the affected area to become white and numb.

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

Ingestion: Not applicable.

Inhalation: There may be drowsiness, slurred speech, muscular weakness, muscle twitching, tremor, blurred vision, dilated pupils and shock.

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

Immediate / special treatment: Not applicable.

Section 5: Fire-fighting measures

5.1. Extinguishing media

Extinguishing media: Alcohol resistant foam. Water spray. Carbon dioxide. Dry chemical powder. 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: Flammable. In combustion emits toxic fumes. Forms explosive air-vapour mixture.

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5.3. Advice for fire-fighters

Advice for fire-fighters: Wear self-contained breathing apparatus. Wear protective clothing to prevent contact with skin and eyes.

Section 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions: Refer to section 8 of SDS for personal protection details. Notify the police and fire brigade immediately. Eliminate all sources of ignition. If outside keep bystanders upwind and away from danger point.

6.2. Environmental precautions

Environmental precautions: 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: Do not use equipment in clean-up procedure which may produce sparks. 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: Smoking is forbidden. Use non-sparking tools. Ensure there is sufficient ventilation of the area. Avoid the formation or spread of mists in the air.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: Store in a cool, well ventilated area. Keep container tightly closed. Keep away from sources of ignition. Prevent the build up of electrostatic charge in the immediate area. Ensure lighting and electrical equipment are not a source of ignition.

Suitable packaging: Must only be kept in original packaging.

7.3. Specific end use(s)

Specific end use(s): No data available.

Section 8: Exposure controls/personal protection

8.1. Control parameters

Workplace exposure limits: No data available.

DNEL/PNEC Values

DNEL / PNEC No data available.

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8.2. Exposure controls

Engineering measures: Ensure there is sufficient ventilation of the area. Ensure lighting and electrical equipment are not a source of ignition.

Respiratory protection: Respiratory protection not required.

Hand protection: Protective gloves.

Eye protection: Safety glasses with side-shields. Safety goggles. Face-shield. Ensure eye bath is to hand.

Skin protection: Protective clothing.

Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

State: Liquified gas

Colour: Colourless

Odour: Characteristic odour

Boiling point/range°C: -42.1

Flammability limits %: lower: 2.2

upper: 9.5

Autoflammability°C: 470

Vapour pressure: 8.3 Bar @ 20oC

Relative density: 1.5 (Air=1)

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. Stable at room temperature.

10.3. Possibility of hazardous reactions

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

Decomposition may occur on exposure to conditions or materials listed below.

10.4. Conditions to avoid

Conditions to avoid: Heat. Hot surfaces. Sources of ignition. Flames.

10.5. Incompatible materials

Materials to avoid: Strong oxidising agents. Strong acids.

10.6. Hazardous decomposition products

Haz. decomp. products: In combustion emits toxic fumes.

Section 11: Toxicological information

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11.1. Information on toxicological effects

Toxicity values: No data available.

Symptoms / routes of exposure

Skin contact: There may be redness or whiteness of the skin in the area of exposure. Frost-bite may occur causing the affected area to become white and numb.

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

Ingestion: Not applicable.

Inhalation: There may be drowsiness, slurred speech, muscular weakness, muscle twitching, tremor, blurred vision, dilated pupils and shock.

Section 12: Ecological information

12.1. Toxicity

Ecotoxicity values: No data available.

12.2. Persistence and degradability

Persistence and degradability: Biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential: No bioaccumulation potential.

12.4. Mobility in soil

Mobility: Readily absorbed into 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

Other adverse effects: Negligible ecotoxicity.

Section 13: Disposal considerations

13.1. Waste treatment methods

Disposal operations: Product evaporates.

Recovery operations: Consult manufacturer or supplier for information regarding recovery and recycling of the product. If recovery is not possible, incinerate at a licenced instalation.

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: UN1978

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14.2. UN proper shipping name

Shipping name: PROPANE

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

Special precautions: No special precautions.

Tunnel code: B/D

Transport category: 2

Section 15: Regulatory information

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

Specific regulations: Not applicable.

15.2. Chemical Safety Assessment

Chemical safety assessment: A chemical safety assessment has not been carried out for the substance or the mixture by the supplier.

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: H220: Extremely flammable gas.

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.