

# SAFETY DATA SHEET

## R32 REFRIGERANT

Infosafe No.: LQ5M4  
ISSUED Date : 16/06/2021  
ISSUED by: Prime

### Section 1 - Identification

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**Product Identifier**

R32 REFRIGERANT

**Company Name**

Prime (ABN 93 142 654 564)

**Address**

1-3 Annick Crescent Laverton North  
Vic 3026 AUSTRALIA

**Telephone/Fax Number**

Tel: +613 8348 9200  
Fax: +613 8353 2083

**Emergency Phone Number**

1800 638 556 (24hrs)

**Emergency Contact Name**

www.actrol.com.au

**Recommended use of the chemical and restrictions on use**

Low temperature refrigerant gas

### Section 2 - Hazard(s) Identification

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**GHS classification of the substance/mixture**

Classified as Hazardous according to the Globally Harmonised System of Classification and labelling of Chemicals (GHS) including Work, Health and Safety regulations, Australia.

Classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail. (7th edition)

Flammable gases: Category 1A

Gases under pressure: Category Refrigerated liquefied gas

Hazardous to the Ozone Layer: Category 1

**Signal Word (s)**

DANGER

**Hazard Statement (s)**

H220 Extremely flammable gas.

H281 Contains refrigerated gas; may cause cryogenic burns or injury.

H420 Harms public health and the environment by destroying ozone in the upper atmosphere.

**Pictogram (s)**

Flame, Gas cylinder, Exclamation mark

**Precautionary Statement – Prevention**

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P282 Wear cold insulating gloves and either face shield or eye protection.

**Precautionary Statement – Response**

P336+P315 Thaw frosted parts with lukewarm water. Do not rub affected area. Get immediate medical advice/attention.

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

P381 In case of leakage, eliminate all ignition sources.

**Precautionary Statement – Storage**

P403 Store in a well-ventilated place.

**Precautionary Statement – Disposal**

P502 Refer to manufacturer or supplier for information on recovery or recycling.

**Section 3 - Composition and Information on Ingredients****Ingredients**

Name	CAS	Proportion
Difluoromethane	75- 10- 5	> 99 %

**Composition, information on ingredients**

HFC-32

**Section 4 - First Aid Measures****Inhalation**

If inhaled, remove affected person from contaminated area. Keep at rest until recovered. If symptoms develop and/or persist seek medical attention.

**Ingestion**

Not considered a potential route of exposure.

**Skin**

Remove all contaminated clothing immediately. Clothing frozen to the skin should be thawed before being removed. Wash affected area thoroughly with soap and water.

For Frostbite: Flush affected areas with lukewarm water (40 - 44 °C). Do not use hot water. Treat as thermal burns and cover with a clean, dry dressing. Seek IMMEDIATE medical attention.

**Eye**

If eye tissue is frozen, seek IMMEDIATE medical attention. If tissue is not frozen, immediately irrigate with copious amounts of warm (40 - 44 °C) water for at least 15 minutes. Remove contact lenses. Eyelids to be held open. Seek medical attention.

**First Aid Facilities**

Eyewash, safety shower and normal washroom facilities.

**Advice to Doctor**

Treat symptomatically.

**Other Information**

For advice in an emergency, contact a Poisons Information Centre (Phone Australia 131 126) or a doctor at once.

**Section 5 - Firefighting Measures****Suitable Extinguishing Media**

Carbon dioxide, dry chemical, foam, water fog or water mist.

**Unsuitable Extinguishing Media**

Do not use water jet.

**Hazards from Combustion Products**

Under fire conditions this product may emit toxic and/or irritating fumes, smoke and gases including carbon monoxide, carbon dioxide and oxides of nitrogen.

**Specific hazards arising from the chemical**

Extremely flammable gas. Explosive gas-air vapour mixtures may form. Flashback along the vapour trail may occur. Keep away from heat, naked flames, and sparks. Cylinders may explode when heated or may become a projectile in a fire.

**Hazchem Code**

2YE

**Decomposition Temperature**

Not available

**Precautions in connection with Fire**

Fire fighters should wear full protective clothing and self-contained breathing apparatus (SCBA) operated in positive pressure mode. In case of fire the product may be violently or explosively reactive. Use water spray to disperse vapours. This product should be prevented from entering drains and watercourses.

## Section 6 - Accidental Release Measures

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### Emergency Procedures

Remove all sources of ignition. Increase ventilation. Evacuate all unprotected personnel. Use self-contained breathing apparatus (S.C.B.A) and full protective clothing to minimise exposure. Allow gas to vent safely to atmosphere, preferably in well ventilated, remote location. Monitor oxygen concentration in confined spaces. Check for leaks using pressure drop test or soapy water on joints and outlets. Shut cylinder valve to stop leak if possible and safe to do so. Check gas concentration to ensure area is safe before removing protective equipment. Damaged gas cylinders should be returned to the supplier.

## Section 7 - Handling and Storage

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### Precautions for Safe Handling

Use in a well ventilated area. Use away from all sources of heat and ignition. Avoid skin and eye contact and breathing of gas. Post "NO SMOKING" signs in area of use. Avoid release of gas into workplace air. Have emergency equipment (for fires, spills, leaks, etc.) readily available. Wear appropriate personal protective equipment and clothing to prevent exposure. Use smallest possible amounts in designated areas with adequate ventilation. Maintain high standards of personal hygiene ie. washing hands prior to eating, drinking, smoking or using toilet facilities. DO NOT enter confined spaces where gas may have collected. Suck back of water into the container must be prevented. Do not allow back feed 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. Refer to supplier's container handling instructions.

### Conditions for safe storage, including any incompatibilities

Cylinders shall be stored in a cool, dry, well-ventilated area out of direct sunlight and away from heat and ignition sources. Outside or detached storage is preferred. No part of cylinders shall be exposed to temperatures above 50°C. Cylinders shall be stored upright on a level, fireproof floor, secure in position and protected from damage. Full cylinders shall be stored separately from empties. Keep cylinder valve cover on. Label empty cylinders and store full cylinders separately from empty ones. Consider leak detection and alarm systems, as required. Limit quantity in storage. Restrict access to storage area and post warning signs. Inspect periodically for deficiencies such as damage or leaks. Have fire extinguishers available in and near the storage area. Ensure that storage conditions comply with applicable local and national regulations.

For information on the design of the storeroom, reference should be made to Australian Standard AS 4332-2004 The storage and handling of gases in cylinders.

## Section 8 - Exposure Controls and Personal Protection

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### Occupational exposure limit values

No exposure standards have been established for the mixture. However, over-exposure to some chemicals may result in enhancement of pre-existing adverse medical conditions and/or allergic reactions and should be kept to the least possible levels.

### Biological Monitoring

No biological limits allocated.

### Control Banding

Not available

### Engineering Controls

This substance is hazardous and should be used with a local exhaust ventilation system, drawing vapours away from workers' breathing zone. A flame-proof exhaust ventilation system is required. If the engineering controls are not sufficient to maintain concentrations of vapours/mists below the exposure standards, suitable respiratory protection must be worn. Refer to relevant regulations for further information concerning ventilation requirements.

### Respiratory Protection

If engineering controls are not effective in controlling airborne exposure then an approved respirator with a replaceable filter should be used. Refer to relevant regulations for further information concerning respiratory protective requirements.

Reference should be made to Australian Standards AS/NZS 1715, Selection, Use and Maintenance of Respiratory Protective Devices; and AS/NZS 1716, Respiratory Protective Devices, in order to make any necessary changes for individual circumstances.

### Eye and Face Protection

Safety glasses with side shields, chemical goggles or full-face shield as appropriate should be used.

If contact with the liquid is possible, safety glasses with full face shield should be used. Eye protection devices should conform to relevant regulations.

Final choice of appropriate eye/face protection will vary according to individual circumstances. Eye protection devices should conform to relevant regulations.

Eye protection should conform with Australian/New Zealand Standard AS/NZS 1337 (series) - Eye Protectors for Industrial Applications.

**Hand Protection**

Wear gloves of impervious material.

If contact with the liquid is possible, insulated gloves suitable for low temperatures should be worn.

Final choice of appropriate gloves will vary according to individual circumstances. i.e. methods of handling or according to risk assessments undertaken. Occupational protective gloves should conform to relevant regulations.

Reference should be made to AS/NZS 2161.1: Occupational protective gloves - Selection, use and maintenance.

**Thermal Hazards**

Contains refrigerated gas; may cause cryogenic burns or injury. If there is a risk of contact with the liquid, all protective equipment worn should be suitable for use with extremely low temperature materials.

**Footwear**

Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Body Protection**

Suitable protective workwear, e.g. cotton overalls buttoned at neck and wrist is recommended. Chemical resistant apron is recommended where large quantities are handled.

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Section 9 - Physical and Chemical Properties**

Properties	Description	Properties	Description
<b>Form</b>	Gas	<b>Appearance</b>	Clear colourless liquefied gas with a slight ether-like odour.
<b>Colour</b>	Colourless	<b>Odour</b>	Slight ether-like odour
<b>Melting Point</b>	-136 °C	<b>Boiling Point</b>	-51.6 °C
<b>Decomposition Temperature</b>	Not available	<b>Solubility in Water</b>	Insoluble in water
<b>Specific Gravity</b>	Not available (20 °C)	<b>pH</b>	Not applicable
<b>Vapour Pressure</b>	1,701 kPa (25 °C)	<b>Relative Vapour Density (Air=1)</b>	2.1
<b>Evaporation Rate</b>	Not available	<b>Odour Threshold</b>	Not available
<b>Viscosity</b>	Not available	<b>Volatile Component</b>	100% gas
<b>Partition Coefficient: n-octanol/water (log value)</b>	Not applicable	<b>Flash Point</b>	Not applicable
<b>Flammability</b>	Extremely flammable gas.	<b>Auto-Ignition Temperature</b>	530°C
<b>Flammable Limits - Lower</b>	13%	<b>Flammable Limits - Upper</b>	33%
<b>Explosion Properties</b>	Not available	<b>Oxidising Properties</b>	Not available

**Section 10 - Stability and Reactivity****Reactivity**

Reacts with incompatible materials

**Chemical Stability**

Stable under normal conditions of storage and handling.

**Possibility of hazardous reactions**

Reacts with incompatible materials.

**Conditions to Avoid**

Heat, open flames, elevated temperatures above 45°C and other sources of ignition

**Incompatible Materials**

Oxidising agents, alkali metals, alkaline earth metals.

**Hazardous Decomposition Products**

Not available

**Hazardous Polymerization**

Not available

**Section 11 - Toxicological Information****Toxicology Information**

No toxicity data available for this product.

**Ingestion**

Ingestion unlikely due to form of product.

**Inhalation**

Inhalation of product vapours may cause irritation of the nose, throat and respiratory system.

**Skin**

May cause frostbite injuries to skin due to uncontrolled release of compressed gas resulting in redness, tissue destruction.

**Eye**

May cause frostbite injuries to eyes due to uncontrolled release of compressed gas resulting in stinging, tearing, blurred vision and possibly permanent damage to eyes.

**Respiratory Sensitisation**

Not expected to be a respiratory sensitiser.

**Skin Sensitisation**

Not expected to be a skin sensitiser.

**Germ Cell Mutagenicity**

Not considered to be a mutagenic hazard.

**Carcinogenicity**

Not considered to be a carcinogenic hazard.

**Reproductive Toxicity**

Not considered to be toxic to reproduction.

**STOT - Single Exposure**

Not expected to cause toxicity to a specific target organ.

**STOT - Repeated Exposure**

Not expected to cause toxicity to a specific target organ.

**Aspiration Hazard**

Not expected to be an aspiration hazard.

## Section 12 - Ecological Information

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**Ecotoxicity**

No ecological data available for this material.

**Persistence and degradability**

Not readily biodegradable.

**Mobility**

Not available

**Bioaccumulative Potential**

Not available

**Other Adverse Effects**

Not available

**Environmental Protection**

Do not discharge this material into waterways, drains and sewers.

**Hazardous to the Ozone Layer**

Harms public health and the environment by destroying ozone in the upper atmosphere

## Section 13 - Disposal Considerations

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**Disposal Considerations**

Dispose of waste according to applicable local and national regulations. 'Empty' containers retain residue (liquid and/or vapour) and can be dangerous. Do not attempt to clean since residue is difficult to remove. Do not pressurise, cut, weld, braze, solder, drill, grind or expose such containers to heat, flame, sparks and other sources of ignition. They may explode and cause injury or death. All containers should be returned to the supplier. Privately owned containers no longer required, should be disposed of in an environmentally safe manner, and in accordance with applicable regulations.

To minimise personal exposure to the chemical, refer to Section 8—Exposure controls and personal protection.

## Section 14 - Transport Information

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### Transport Information

This material is classified as Dangerous Goods Division 2.1 Flammable Gases

Division 2.1 Dangerous Goods are incompatible in a placard load with any of the following:

- Class 1: Explosives
- Division 2.2 Non-flammable, Non toxic gas that have a subsidiary risk 5.1 except when all are packed in cylinders or pressure drums not exceeding 500L capacity.
- Class 3: Flammable Liquids, if both the Division 2.1 and Class 3 dangerous goods are in tanks or other receptacles with a capacity individually exceeding 500L.
- Division 4.1: Flammable Solids
- Division 4.2: Spontaneously combustible substances
- Division 4.3: Dangerous when wet substances
- Division 5.1: Oxidising substances
- Division 5.2: Organic peroxides
- Class 7: Radioactive materials unless specifically exempted

Marine Transport (IMO/IMDG):

Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea.

UN-No: 3252

Proper Shipping Name: DIFLUOROMETHANE (REFRIGERANT GAS R 32)

Class: 2.1

Packaging Group: -

EMS No.: F-D, S-U

Special provisions: -

Air Transport (ICAO/IATA):

Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air.

Class/Division: 2.1

UN No: 3252

Proper Shipping Name: Difluoromethane (Refrigerant gas R 32)

Packing Group: -

Packaging Instructions (passenger & cargo): Forbidden

Packaging Instructions (cargo only): 200

Hazard Label: Flammable Gas

Special provisions: A1

#### UN Number

3252

#### Proper Shipping Name

DIFLUOROMETHANE (REFRIGERANT GAS R 32)

#### Transport Hazard Class

2.1

#### Hazchem Code

2YE

#### IERG Number

04

#### Special Precautions for User

Not available

#### IMDG Marine pollutant

No

#### Transport in Bulk

Not available

## Section 15 - Regulatory Information

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### Regulatory Information

Classified as Hazardous according to the Globally Harmonised System of Classification and labelling of Chemicals (GHS) including Work, Health and Safety regulations, Australia.

Not classified as a Scheduled Poison according to the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

**Poisons Schedule**

Not Scheduled

**Montreal Protocol**

Listed

**Stockholm Convention**

Not available

**Rotterdam Convention**

Not available

**International Convention for the Prevention of Pollution from Ships (MARPOL)**

Not available

**Agricultural and Veterinary Chemicals Act 1994**

Not available

**Basel Convention**

Not available

**Global Inventory Status**

Country/Region Inventory	Status Description	Country/Region Inventory	Status Description
Australia (AICS/AIIC)	All components of this product are listed on the Australian Inventory of Chemical Substances (AICS).		

**Section 16 - Any Other Relevant Information****Date of Preparation**

SDS Reviewed: June 2021 Supersedes: June 2016

**Version Number**

Version 2.0

**Literature References**

Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice.

Standard for the Uniform Scheduling of Medicines and Poisons.

Australian Code for the Transport of Dangerous Goods by Road &amp; Rail.

Work Health and Safety Regulations, Schedule 10: Prohibited carcinogens, restricted carcinogens and restricted hazardous chemicals.

Code of Practice for Supply Diversion into Illicit Drug Manufacture.

National Code of Practice for Chemicals of Security Concern.

Agricultural Compounds and Veterinary Chemicals Act.

International Agency for Research on Cancer (IARC) Monographs.

Montreal Protocol on Substances that Deplete the Ozone Layer.

Stockholm Convention on Persistent Organic Pollutants (POPs).

Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade.

Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal.

International Air Transport Association (IATA) Dangerous Goods Regulations.

International Maritime Dangerous Goods (IMDG) Code.

Workplace exposure standards for airborne contaminants.

Adopted biological exposure determinants, American Conference of Industrial Hygienists (ACGIH).

Globally Harmonised System of Classification and Labelling of Chemicals.

Code of Practice: Managing Noise and Preventing Hearing Loss at Work.

**END OF SDS**

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