

## SAFETY DATA SHEET

**Item Code: L0167**

<b>Section 1.</b>	<b>Identification of the material and the supplier</b>
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Item Code:	L0167
Product:	R407F
Product Use:	Refrigerant Gas
New Zealand Supplier:	Realcold Ltd
Address:	9 Prescott Street Penrose, Auckland
Telephone:	09 526 5700
Fax Number:	09 526 5721
<b>Emergency Telephone:</b>	<b>09 526 5700</b> <b>0800 243 622 (0800 CHEMCALL)</b>
Manufacturer:	Global Refrigerants (S) Pte Ltd 9 Tuas Link 1, Singapore
Date of SDS Preparation:	14 March 2017 – version 2

<b>Section 2.</b>	<b>Hazards Identification</b>
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**As per the manufacturers SDS this substance is not hazardous .**

<b>Section 3.</b>	<b>Composition / Information on Ingredients</b>
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Ingredients	Wt%	CAS NUMBER.
1.1.1.2-Tetrafluoroethane (R134a)	40%	811-97-2
Difluoromethane (R32)	30%	75-10-5
Pentafluoroethane(R125)	30%	354-33-6

<b>Section 4.</b>	<b>First Aid Measures</b>
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Routes of Exposure:

If in Eyes	Immediately flush eyes with gentle but large stream of water for at least 15 minutes. Call a physician if needed.
If on Skin	In case of frostbite spray with water for at least 15 minutes. Apply a sterile dressing. Call a physician if needed.
If Swallowed	Is not considered a possible route.
If Inhaled	In low concentrations may cause narcotic effects. Symptoms may include dizziness, headache, nausea and loss of co-ordination. In high concentrations may cause asphyxiation. Symptoms may include loss of mobility consciousness. Victim may not be aware of asphyxiation. Remove victim to uncontaminated area wearing self-contained breathing apparatus. Keep victim warm and rested. Call a doctor. Apply artificial respiration if breathing stopped.

**Section 5. Fire Fighting Measures**

<b>Hazard Type</b>	Exposure to fire may cause containers to rupture or explode.
<b>Hazards from decomposition products</b>	At high temperature, thermal decomposition giving toxic and corrosive products : Carbon monoxide, Carbonyl fluoride, Hydrogen fluoride
<b>Suitable Extinguishing media</b>	All known extinguishers can be used. If possible stop flow of product. Move away from the container and cool with water from a protected position.
<b>Precautions for firefighters and special protective clothing</b>	Wear self-contained breathing apparatus and protective suit.
<b>HAZCHEM CODE</b>	<b>2TE</b>

**Section 6. Accidental Release Measures**

Evacuate area. Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe. Ensure adequate air ventilation. Try to stop release. Prevent vapour from entering sewers, basements and workpits, or any place where its accumulation can cause asphyxiation. Ventilate area.

**Section 7. Handling and Storage**

**Handling & Storage** 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. Keep container below 50°C in a well ventilated place.

**Section 8 Exposure Controls / Personal Protection****WORKPLACE EXPOSURE STANDARDS (provided for guidance only)**

Substance	CAS #	TWA		STEL	
		ppm	mg/m3	ppm	mg/m3
1.1.1.2-Tetrafluoroethane (R134a)	811-97-2	1000	-	-	-
Difluoromethane (R32)	75-10-5	1000	-	-	-
Pentafluoroethane(R125)	354-33-6	1000	-	-	-

Workplace Exposure Standard – Time Weighted Average (WES-TWA). *The time-weighted average exposure standard designed to protect the worker from the effects of long-term exposure.* Workplace Exposure Standard – Short-Term Exposure Limit (WESSTEL). *The 15-minute average exposure standard.* Applies to any 15- Minute period in the working day and is designed to protect the worker against adverse effects of irritation, chronic or irreversible tissue change, or narcosis that may increase the likelihood of accidents. The WES-STEL is not an alternative to the WES-TWA; both the short-term and time-weighted average exposures apply.

**Engineering Controls** Ensure adequate ventilation.  
**Personal Protection**

Respiratory protection: In case of insufficient ventilation use suitable respiratory equipment.  
Eye protection : Safety glasses / goggles.  
Hand protection : Gloves.  
Hygiene measures : Avoid contact with skin and eyes and inhalation of vapours. Do not smoke.

## Section 9 Physical and Chemical Properties

<b>Appearance</b>	Colourless gas
<b>Odour</b>	Etheral
<b>Boiling Point</b>	-45.5°C
<b>Molecular weight</b>	82.058
<b>Vapour Pressure 20°C</b>	11.4 bar(a)
<b>Partition coefficient</b>	(n-octanol / water): R23: log Pow = 0.64
<b>Critical temperature</b>	82.6°C
<b>Solubility in Water</b>	Not known, but considered to have a low solubility
<b>Relative Density Liquid</b>	1.1 (water = 1)
<b>Relative Density Gas</b>	2.9 (air = 1)

**Other data:** Gas/vapour heavier than air. May accumulate in confined spaces, particularly at or below ground level.

## Section 10. Stability and Reactivity

<b>Stability of Substance</b>	The product is stable under normal conditions
<b>Conditions to Avoid</b>	May react with aluminium
<b>Hazardous Decomposition Products</b>	Thermal decomposition yields toxic products which can be corrosive in the presence of water.

## Section 11 Toxicological Information

May product irregular heart beat and nervous system

## Section 12. Ecotoxicological Information

When discarded in large quantities may contribute to the greenhouse effect.  
Global warming factor: 1824 (CO<sub>2</sub>=1)

## Section 13. Disposal Considerations

Avoid discharge into the atmosphere. Regularly check containment systems and cylinders for leaks.  
Do not discharge into any place where its accumulation could be dangerous.

## Section 14 Transport Information

This product is classified as a Dangerous Good for transport in NZ ; NZS 5433:2007

### Road and Rail Transport

UN No:	3163
Class-primary	2
Packing Group	Non allocated
Proper Shipping Name:	LIQUEFIED GAS N.O.S.(1.1.1.2 – Tetrafluoroethane[R134a], Difluoromethane [R32], Pentafluoroethane [R125].

### Air Transport

UN No: 3163  
Class-primary 2  
Packing Group Non allocated  
Proper Shipping Name: LIQUEFIED GAS N.O.S.(1.1.1.2 – Tetrafluoroethane[R134a], Difluoromethane [R32], Pentafluoroethane [R125].  
IATA Passenger packing instruction 200  
IATA Passenger max qty/pack 75kg  
IATA cargo packing instruction 200  
IATA cargo max qty/pack 150kg

### Marine Transport

UN No: 3163  
Class-primary 2  
Packing Group Non allocated  
Proper Shipping Name: LIQUEFIED GAS N.O.S.(1.1.1.2 – Tetrafluoroethane[R134a], Difluoromethane [R32], Pentafluoroethane [R125].  
Marine pollutant No

## **Section 15 Regulatory Information**

This substance is not hazardous according to the HSNO (Minimum Degrees of Hazard) Regulations 2001

## **Section 16 Other Information**

1. HSNO Approved Code of Practice: Preparation of Safety Data Sheets, September 2006.

### Disclaimer

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Please contact the New Zealand distributor, Realcold Ltd, if further information is required.

Issue Date: 14 March 2017

Review Date: 14 March 2022