

## SAFETY DATA SHEET

**Item Code: W9474**

<b>Section 1.</b>	<b>Identification of the material and the supplier</b>
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Item Code:	W9474
Product:	R508B
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 766 764 (National Poison Centre)</b>
Manufacturer:	Global Refrigerants (S) Pte Ltd 9 Tuas Link 1, Singapore
Date of MSDS Preparation:	14 March 2017 – version 2

<b>Section 2.</b>	<b>Hazards Identification</b>
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**This substance is not hazardous according to the *HSNO (Minimum Degrees of Hazard) Regulations 2001***

<b>Section 3.</b>	<b>Composition / Information on Ingredients</b>
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Ingredients	Wt%	CAS NUMBER.
Trifluoromethane R23	46%	75-46-7
Hexafluoroethane	54%	76-16-4

<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	Remove contaminated clothing and wash skin with warm soapy water. Get medical assistance if needed. Frostbite: Treat as thermal burns.
If Swallowed	If swallowed, call a physician immediately or hospitalize. Never give anything by mouth to an unconscious person.
If Inhaled	Remove person to fresh air. Remove contaminated clothing and loosen remaining clothing. Allow person to assume most comfortable position and keep warm. Keep at rest until fully recovered. Get medical advice if breathing becomes difficult. Give oxygen or artificial respiration if needed.

**Section 5. Fire Fighting Measures**

<b>Hazard Type</b>	Non Flammable
<b>Hazards from decomposition products</b>	At high temperature, thermal decomposition giving toxic and corrosive products : hydrogen fluoride (hydrofluoric acid)
<b>Suitable Extinguishing media</b>	Cool containers or tanks with water spray. Prohibit all sources of sparks and ignition. Do not smoke.
<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**

Avoid contact with skin and eyes and inhalation of vapours. In enclosed areas : ventilate or wear a self-contained breathing apparatus (risk of asphyxia). Remove all sources of ignition. Do not smoke.

**Section 7. Handling and Storage**

**Handling** Storage and handling precautions applicable to products : LIQUIFIED GAS UNDER PRESSURE. Provide appropriate exhaust and ventilation at machinery. Provide showers, eye-baths. Well ventilate empty vats and tanks before entering. Prohibit ignition sources and contact with hot surfaces. Do not smoke.

**Storage** Keep away from naked flames, hot surfaces and sources of ignition. Keep in a cool well-ventilated place. Keep at temperatures of between 0°C and 50°C. Protect full containers from sources of heat to avoid over pressurization.

**Packaging Materials**

**Recommended** Steel, stainless steel, aluminum

**Prohibited** Alloys containing more than 2% of magnesium

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

Substance	CAS #	TWA		STEL	
		ppm	mg/m3	ppm	mg/m3
Trifluoromethane R23	75-46-7	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** Provide sufficient air exchange and/or exhaust in work areas.

## 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 / Gaseous
<b>Odour</b>	Slightly ether like
<b>Boiling Point</b>	-87.70°C
<b>Decomposition temperature</b>	R23 : 1150°C
<b>Vapour Density</b>	6.49 kg/m <sup>3</sup>
<b>Vapour Pressure</b>	1,179 mPa (11,79 bar) at -30°C 1,603 mPa (16,03 bar) at -20°C 2,129 mPa (21,29 bar) at -10°C 2.772 mPa (27,72 bar) at 0°C
<b>Partition coefficient</b>	(n-octanol / water): R23: log Pow = 0.64
<b>Critical temperature</b>	13°C
<b>Critical Pressure</b>	3.80 mPa (38 bar)
<b>Henry's constant (R23)</b>	95710 X Exp(2) Pa.m <sup>3</sup> /mol
<b>Solubility in Water</b>	R23: slightly soluble (25°C): 1 g/L
<b>Solubility in solvents</b>	Miscible with hydrocarbons, chlorinated derivatives, ketones, esters
<b>Liquid Density</b>	1286 kg/m <sup>3</sup> at -30°C 1226 kg/m <sup>3</sup> at -20°C 1156 kg/m <sup>3</sup> at -10°C 1074 kg/m <sup>3</sup> at 0°C

## Section 10. Stability and Reactivity

<b>Stability of Substance</b>	The product is a stable gas at ambient temperature
<b>Conditions to Avoid</b>	Avoid contact with flames and red hot metallic surfaces
<b>Hazardous Decomposition Products</b>	At high temperature: Thermal decomposition giving toxic and corrosive products : hydrogen fluoride (hydrofluoric acid).

## Section 11 Toxicological Information

### Acute toxicity :

**Inhalation:** Effects of breathing high concentrations of vapour may include : headache, sleepiness, dizziness.

As with other volatile aliphatic halogenated compounds, through vapour accumulation and/or inhalation of large quantities, the product can cause loss of consciousness and cardiac disorders aggravated by stress and lack of oxygen : risk of mortality.

R23, R116 : reported in animals : practically not harmful by inhalation. No mortality in rat at 200.000 ppm (during 2h).

### Local Effects:

**Skin Contact:** Ejection of liquefied gas: Frostbite possible

**Eye Contact:** Ejection of liquefied gas: Frostbite possible

**Chronic Toxicity:** R23, R116 : studies of prolonged inhalation in animals have not shown sub-chronic toxic effects.

**Specific Effects:** : R23 : genotoxicity : according to limited available data : genotoxicity not demonstrated.

## Section 12. Ecotoxicological Information

### For Trifluoromethane R23 (Cas no:75-46-7)

Mobility: Evaporation : t 1/2 life = 2,45 h (river) - 29 h (pond)  
Degradability in air: Degradation by OH radicals : tY2 life = 9036 d  
Bioaccumulation: Practically not bioaccumulable : log Pow = 0,64.

### For Hexafluoroethane R116 (Cas no 76-16-4)

No information available

### For R508B

Degradability in air: Ozone Depletion Potential : ODP (R1-1 = 1) = 0

## Section 13. Disposal Considerations

Recycle or incinerate at an approved waste site only.

## Section 14 Transport Information

This product is not classified as a Dangerous Good for transport in NZ ; NZS 5433:2007

### Road and Rail Transport

UN No: 1078  
Class-primary 2  
Packing Group None allocated  
Proper Shipping Name: REFRIGERANT GAS N.O.S.  
(trifluoromethane / hexfluoroethane)

### Air Transport

UN No: 1078  
Class-primary 2  
Packing Group None allocated  
Proper Shipping Name: REFRIGERANT GAS N.O.S.  
(trifluoromethane / hexfluoroethane)

### Marine Transport

UN No: 1078  
Class-primary 2  
Packing Group None allocated  
Proper Shipping Name: REFRIGERANT GAS N.O.S.  
(trifluoromethane / hexfluoroethane)

## Section 15 Regulatory Information

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

Product Name: R508B

Item No: W9474

Issued by: Realcold Ltd

Date of MSDS: 16 August 2012

Tel: 64 9 526 5700

<b>Section 16</b>	<b>Other Information</b>
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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.

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