

# Safety Data Sheet



## 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

**Product Name:** R507

**Recommended Use of the Chemical and Restrictions on Use** Refrigerant.

**Supplier:** Ixom Operations Pty Ltd  
**ABN:** 51 600 546 512  
**Street Address:** Level 8, 1 Nicholson Street  
East Melbourne Victoria 3002  
Australia

**Telephone Number:** +61 3 9906 3000  
**Emergency Telephone:** 1 800 033 111 (ALL HOURS)

Please ensure you refer to the limitations of this Safety Data Sheet as set out in the "Other Information" section at the end of this Data Sheet.

## 2. HAZARDS IDENTIFICATION

Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for Transport by Road and Rail; DANGEROUS GOODS.

This material is hazardous according to Safe Work Australia; HAZARDOUS CHEMICAL.

**Classification of the chemical:**  
Gases under pressure - Liquefied Gas

**SIGNAL WORD:** WARNING



**Hazard Statement(s):**  
H280 Contains gas under pressure; may explode if heated.

**Precautionary Statement(s):**

**Prevention:**  
No prevention statements.

**Response:**  
No response statements.

**Storage:**  
P410+P403 Protect from sunlight. Store in a well-ventilated place.

**Disposal:**  
No disposal statements.

**Poisons Schedule (SUSMP):** None allocated.

## 3. COMPOSITION AND INFORMATION ON INGREDIENTS

*Product Name:* R507  
*Substance No:* 000000017554

*Issued:* 02/08/2019  
*Version:* 3

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**Product Description:** Refrigerant gas.

Components	CAS Number	Proportion	Hazard Codes
Pentafluoroethane	354-33-6	50%	H280
1,1,1-Trifluoroethane	420-46-2	50%	H220 H280

## 4. FIRST AID MEASURES

For advice, contact a Poisons Information Centre (e.g. phone Australia 131 126; New Zealand 0800 764 766) or a doctor.

### **Inhalation:**

Remove victim from area of exposure - avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. If patient finds breathing difficult and develops a bluish discolouration of the skin (which suggests a lack of oxygen in the blood - cyanosis), ensure airways are clear of any obstruction and have a qualified person give oxygen through a face mask. Apply artificial respiration if patient is not breathing. Seek immediate medical advice. Do not give epinephrine (adrenaline).

### **Skin Contact:**

For freeze burns, immediately flood burnt area with large amounts of luke-warm water and cover with a clean, dry dressing. Do not use hot water. Seek immediate medical assistance.

### **Eye Contact:**

Immediately wash in and around the eye area with large amounts of water for at least 15 minutes. Eyelids to be held apart. Remove clothing if contaminated and wash skin. Urgently seek medical assistance. Transport promptly to hospital or medical centre.

### **Ingestion:**

Rinse mouth with water. If swallowed, do NOT induce vomiting. Give a glass of water. Seek immediate medical assistance.

### **Indication of immediate medical attention and special treatment needed:**

Treat symptomatically. This material may make the heart more susceptible to arrhythmias. Catecholamines such as adrenaline, and other compounds having similar effects, should be reserved for emergencies and then used only with special caution.

## 5. FIRE FIGHTING MEASURES

### **Suitable Extinguishing Media:**

Water fog (or if unavailable fine water spray).

**Hazchem or Emergency Action Code:** 2TE

### **Specific hazards arising from the chemical:**

Containers may rupture or explode in heat of fire. R507 is not flammable at temperatures up to 100°C at atmospheric pressure. However, mixtures of R507 with high concentrations of air at elevated pressure can become combustible at ambient temperature. As the temperature of the mixture is increased, lower pressure, but still greater than atmospheric pressure, can create the same effect. Therefore, R507 should not be mixed with air under pressure for leak testing or other purposes. In general, R507 should not be used or allowed to exist with high concentrations of air above atmospheric pressure. Gas/vapour is heavier than air; may accumulate in confined spaces.

**Special protective equipment and precautions for fire-fighters:**

Decomposes on heating emitting toxic fumes, including those of hydrofluoric acid , oxides of carbon , hydrocarbons . Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to products of decomposition. Keep containers cool with water spray.

## 6. ACCIDENTAL RELEASE MEASURES

**Emergency procedures/Environmental precautions:**

Clear area of all unprotected personnel. Shut off all possible sources of ignition. If contamination of sewers or waterways has occurred advise local emergency services.

**Personal precautions/Protective equipment/Methods and materials for containment and cleaning up:**

SMALL SPILLS: If safe to do so, isolate the leak. Small spills are allowed to evaporate provided there is adequate ventilation. LARGE SPILLS: Avoid breathing in vapours. Work up wind or increase ventilation. Wear protective equipment to prevent skin and eye contact and breathing in vapours/dust. Contain - prevent run off into drains and waterways. Use absorbent (soil, sand or other inert material).

## 7. HANDLING AND STORAGE

**Precautions for safe handling:**

Avoid skin and eye contact and breathing in vapour. Do not drag, drop, slide or roll cylinders. The uncontrolled release of a gas under pressure may cause physical harm. Use a suitable hand truck for cylinder movement. When using do not eat, drink or smoke. Launder contaminated clothing before reuse.

**Conditions for safe storage, including any incompatibilities:**

Store cylinders upright, prevented from falling in a secure area and away from combustible material. Store below 45 °C in a dry, well ventilated area constructed of non-combustible material with a firm level floor (preferably concrete), away from heavy traffic and emergency exits. Store away from incompatible materials described in Section 10. Keep containers closed when not in use - check regularly for leaks.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Control Parameters:** No value assigned for this specific material by Safe Work Australia. However, supplier recommended Workplace Exposure Standard(s):

8 hr TWA = 1000 ppm, 4900 mg/m<sup>3</sup> (Pentafluoroethane)

8 hr TWA = 1000 ppm (1,1,1-Trifluoroethane)

TWA - The time-weighted average airborne concentration of a particular substance when calculated over an eight-hour working day, for a five-day working week.

These Workplace Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These workplace exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.

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## Appropriate engineering controls:

Ensure ventilation is adequate and that air concentrations of components are controlled below quoted Workplace Exposure Standards. Vapour heavier than air - prevent concentration in hollows or sumps. DO NOT enter confined spaces where vapour may have collected. Keep containers closed when not in use.

If in the handling and application of this material, safe exposure levels could be exceeded, the use of engineering controls such as local exhaust ventilation must be considered and the results documented. If achieving safe exposure levels does not require engineering controls, then a detailed and documented risk assessment using the relevant Personal Protective Equipment (PPE) (refer to PPE section below) as a basis must be carried out to determine the minimum PPE requirements.

## Individual protection measures, such as Personal Protective Equipment (PPE):

The selection of PPE is dependent on a detailed risk assessment. The risk assessment should consider the work situation, the physical form of the chemical, the handling methods, and environmental factors.

OVERALLS, SAFETY SHOES, CHEMICAL GOGGLES, GLOVES.



Wear overalls, chemical goggles and impervious gloves. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use. If determined by a risk assessment an inhalation risk exists, wear an organic vapour respirator or an air-supplied respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical state:</b>	Liquefied gas
<b>Colour:</b>	Colourless
<b>Odour:</b>	Faint Ethereal
<b>Solubility:</b>	Insoluble in water.
<b>Specific Gravity:</b>	1.07 @21.1°C
<b>Relative Vapour Density (air=1):</b>	3.43
<b>Vapour Pressure (20 °C):</b>	153.9 psia
<b>Flash Point (°C):</b>	Not applicable
<b>Flammability Limits (%):</b>	Not applicable
<b>Autoignition Temperature (°C):</b>	>750
<b>Solubility in water (g/L):</b>	Not available
<b>Boiling Point/Range (°C):</b>	-46.7
<b>Decomposition Point (°C):</b>	>250
<b>pH:</b>	Not available

## 10. STABILITY AND REACTIVITY

<b>Reactivity:</b>	No information available.
<b>Chemical stability:</b>	Stable.
<b>Possibility of hazardous reactions:</b>	Hazardous polymerisation will not occur.

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<b>Conditions to avoid:</b>	Do not heat above 52°C. Avoid exposure to heat, sources of ignition, and open flame. Avoid contact with strong oxidising agents .
<b>Incompatible materials:</b>	Incompatible with alkalis , alkaline earth metals , calcium , potassium , powdered aluminium , beryllium , magnesium , zinc .
<b>Hazardous decomposition products:</b>	Hydrofluoric acid. Oxides of carbon. Hydrocarbons. Halogens. Halogen acids. Carbonyl halides.

## 11. TOXICOLOGICAL INFORMATION

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

<b>Ingestion:</b>	Not a likely route of exposure, however, swallowing liquid will result in freeze burns of the mouth, throat and stomach.
<b>Eye contact:</b>	Liquid splashes or spray may cause freeze burns to the eye.
<b>Skin contact:</b>	Liquid splashes or spray may cause freeze burns.
<b>Inhalation:</b>	Breathing in high concentrations can produce central nervous system depression, which can lead to loss of co-ordination, impaired judgement and if exposure is prolonged, unconsciousness. Breathing in high concentrations may result in an irregular heart beat and prove suddenly fatal.

**Acute toxicity:** No LD50 data available for the product.

**Respiratory or skin sensitisation:** No information available.

**Chronic effects:** Not listed as carcinogenic according to the International Agency for Research on Cancer (IARC).

**Aspiration hazard:** No information available.

## 12. ECOLOGICAL INFORMATION

<b>Ecotoxicity</b>	Avoid contaminating waterways.
<b>Persistence/degradability:</b>	Global warming has been predicted as a potential consequence of the emission of this product.
<b>Bioaccumulative potential:</b>	No information available.
<b>Mobility in soil:</b>	No information available.

## 13. DISPOSAL CONSIDERATIONS

**Disposal methods:**  
Best practice is to recover and recycle. Otherwise refer to Land Authority for an approved facility which is equipped to absorb and neutralise waste substances.

## 14. TRANSPORT INFORMATION

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## Road and Rail Transport

Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for Transport by Road and Rail; DANGEROUS GOODS.



**UN No:** 3163  
**Transport Hazard Class:** 2.2 Non-Flammable Non-Toxic Gas  
**Proper Shipping Name or Technical Name:** LIQUEFIED GAS, N.O.S. (PENTAFLUOROETHANE AND 1,1,1-TRIFLUOROETHANE)  
**Hazchem or Emergency Action Code:** 2TE

## Marine Transport

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

**UN No:** 3163  
**Transport Hazard Class:** 2.2 Non-Flammable Non-Toxic Gas  
**Proper Shipping Name or Technical Name:** LIQUEFIED GAS, N.O.S. (PENTAFLUOROETHANE AND 1,1,1-TRIFLUOROETHANE)  
**IMDG EMS Fire:** F-C  
**IMDG EMS Spill:** S-V

## Air Transport

Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air; DANGEROUS GOODS. TRANSPORT PROHIBITED under the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air in Passenger and Cargo Aircraft; may be transported by Cargo Aircraft Only.

**UN No:** 3163  
**Transport Hazard Class:** 2.2 Non-Flammable Non-Toxic Gas  
**Proper Shipping Name or Technical Name:** LIQUEFIED GAS, N.O.S. (PENTAFLUOROETHANE AND 1,1,1-TRIFLUOROETHANE)

## 15. REGULATORY INFORMATION

### Classification:

This material is hazardous according to Safe Work Australia; HAZARDOUS CHEMICAL.

### Classification of the chemical:

Gases under pressure - Liquefied Gas

### Hazard Statement(s):

H280 Contains gas under pressure; may explode if heated.

**Poisons Schedule (SUSMP):** None allocated.

All the constituents of this material are listed on the Australian Inventory of Chemical Substances (AICS).

## 16. OTHER INFORMATION

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Supplier Safety Data Sheet; 04/ 2018.

This safety data sheet has been prepared by Ixom Operations Pty Ltd (Toxicology & SDS Services).

**Reason(s) for Issue:**

5 Yearly Revised Primary SDS

This SDS summarises to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. Since Ixom Operations Pty Ltd cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material.

If clarification or further information is needed, the user should contact their Ixom representative or Ixom Operations Pty Ltd at the contact details on page 1.

Ixom Operations Pty Ltd's responsibility for the material as sold is subject to the terms and conditions of sale, a copy of which is available upon request.