

SAFETY DATA SHEET

Item Code: L0159

Section 1. Identification of the material and the supplier

Item Code: L0159
 Product: Du-Pont –Isceon M059 (R-417A) refrigerant
 Product Use: Refrigerant

New Zealand Supplier: Realcold Ltd
 Address: 9 Prescott Street
 Penrose, Auckland

Telephone: 09 526 5700
 Fax Number: 09 526 5721

Emergency Telephone: 09 526 5700
0800 766 764 (National Poison Centre)

Manufacturer: Du Pont
 7 Eden Park Drive
 Macquarie Park NSW 2113
 Australia

Date of MSDS Preparation: 14 March 2017 – ver 2

Section 2. Hazards Identification

This substance has been determined by the manufacturer to be not hazardous according to the HSNO (Minimum Degrees of Hazard) Regulations 2001

This substance is classified as a dangerous good according to NZS5433: 2007 & the ADG Code

Section 3. Composition / Information on Ingredients

Ingredients	Wt%	CAS NUMBER.
1,1,1,2-Tetrafluoroethane	50	811-97-2
Pentafluoroethane	46.6	354-33-6
Butane	3.4	106-97-8

Section 4. First Aid Measures

Routes of Exposure:

If in Eyes: Immediately flush eyes with gentle but large stream of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Call a physician immediately.

If on Skin: Remove contaminated clothing and wash skin with warm soapy water. Do not scrub.

If Swallowed: If swallowed, call a physician immediately. Only induce vomiting at the instruction of a physician. 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.

Notes to physician

Treatment : Do not give adrenaline or similar drugs.

Section 5. Fire Fighting Measures

Hazard Type	Combustible in presence of ignition source when under pressure or elevated temperatures.
Hazards from decomposition products	Hydrogen halides, Carbon dioxide (CO ₂), Carbon monoxide, Fluorocarbons, Carbonyl halides
Suitable Extinguishing media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Cool containers / tanks with water spray.
Precautions for firefighters and special protective clothing	In the event of fire, wear self-contained breathing apparatus. Wear neoprene gloves during cleaning up work after a fire
HAZCHEM CODE	2TE

Section 6. Accidental Release Measures

Evacuate personnel to safe areas. Ventilate the area. Wear protective clothing. Should not be released into the environment.

Section 7. Handling and Storage

Handling Provide sufficient air exchange and/or exhaust in work rooms. Wear protective clothing. No special protective measures against fire required.

Storage Keep container tightly closed in a dry and well-ventilated place. Store in original container. Keep at temperature not exceeding 52°C.

Section 8 Exposure Controls / Personal Protection

WORKPLACE EXPOSURE STANDARDS (provided for guidance only)

Substance	CAS #	TWA		STEL	
		ppm	mg/m ³	ppm	mg/m ³
1,1,1,2-Tetrafluoroethane	811-97-2	1000ppm,	4,240 mg/m ³		
Butane	106-97-8	800ppm,	1900mg/m ³		

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, especially in confined areas.

Personal Protection :

Respiratory protection : Half mask with a particle filter conforming to AS1715, AS1716.
Hand protection : Heat insulating gloves
Eye protection : Safety glasses
Hygiene measures : Handle in accordance with good industrial hygiene and safety practice.

Section 9 Physical and Chemical Properties

Appearance	Liquified Gas, colourless
Odour	slight, ether like
Flash Point	Does not flash
Boiling Point	-41.8 °C at 1,013 hPa
Density	1.2 g/cm ³ at 20 °C (as liquid)
Relative Vapour Density	3.92
PH	Neutral
Vapour Pressure	9,720 hPa at 25 °C
Solubility in Water	1.2 g/l at 25 °C

Section 10. Stability and Reactivity

Stability of Substance Stable under recommended storage conditions.
Conditions to Avoid The product is not flammable in air under ambient conditions of temperature and pressure. When pressurised with air or oxygen, the mixture may become flammable. Certain mixtures of HCFCs or HFCs with chlorine may become flammable or reactive under certain conditions.

Incompatible Materials
Hazardous Decomposition Products Alkali metals Alkaline earth metals, Powdered metals, powdered metal salts

Section 11 Toxicological Information

Acute inhalation toxicity

1,1,1,2- Tetrafluoroethane: ALC/4 h/rat : 567000 ppm
LC50/4 h/rat : 358500 ppm
//dog : Cardiac sensitization

Pentafluoroethane : LC50/4 h/mouse : 556329 ppm

Butane : LC50/4 h/rat : 658 mg/l
Central nervous system depression
Decreased heart rate changes in blood pressure

Toxicity to reproduction assessment :

Did not show mutagenic or teratogenic effects in animal experiments.

Human experience :

Excessive exposures may affect human health, as follows:

Inhalation:

Severe shortness of breath, Irregular cardiac activity, narcosis

Further information :

Rapid evaporation of the liquid may cause frostbite.

Section 12. Ecotoxicological Information

Toxicity to fish

1,1,1,2-Tetrafluoroethane : LC50/96 h/Oncorhynchus mykiss (rainbow trout): 450 mg/l

Butane : LC50/96 h/Fish (unspecified species): > 1,000 mg/l

Aquatic toxicity

1,1,1,2- Tetrafluoroethane: EC50/48 h/Daphnia magna (Water flea): 980 mg/l

Section 13. Disposal Considerations

Can be used after re-conditioning. Empty pressure vessels should be returned to the supplier. Comply with Local Regulations.

Section 14 Transport Information

Classified as a Dangerous Good for transport

Road and Rail Transport (in NZ ; NZS 5433:2007)

UN No: 1078
Class-primary 2.2
Packing Group None allocated
Proper Shipping Name: Refrigerant gas, N.O.S

Air Transport

UN No: 1078
Class-primary 2.2
Packing Group None allocated
Proper Shipping Name: Refrigerant gas, N.O.S

Marine Transport

UN No: 1078
Class-primary 2.2
Packing Group None allocated
Proper Shipping Name: Refrigerant gas, N.O.S

Section 15 Regulatory Information

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

Management of this product must comply with the HSNO (Compresses Gases) Regulations 2004

Section 16 Other Information

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

Disclaimer

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