

SAFETY DATA SHEET

0194

Product Name **HCFC 141B**

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Supplier name BOC LIMITED (AUSTRALIA)
Address 10 Julius Avenue, North Ryde, NSW, 2113, AUSTRALIA
Telephone 131 262, (02) 8874 4400
Fax 132 427 (24 hours)
Emergency 1800 653 572 (24/7) (Australia only)
Web site <http://www.boc.com.au/>
Synonym(s) 0194 - MSDS NUMBER • 1,1-DICHLORO-1-FLUOROETHANE • DICHLOROFLUOROETHANE • HCFC 141 B
Use(s) FOAMING AGENT • REFRIGERANT • SOLVENT
SDS date 08 January 2014

2. HAZARDS IDENTIFICATION

NOT CLASSIFIED AS HAZARDOUS ACCORDING TO SAFE WORK AUSTRALIA CRITERIA

RISK PHRASES

None allocated

SAFETY PHRASES

None allocated

NOT CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE

UN number	None Allocated	DG class	None Allocated
Packing group	None Allocated	Subsidiary risk(s)	None Allocated
Hazchem code	None Allocated		

3. COMPOSITION/ INFORMATION ON INGREDIENTS

Ingredient	Identification	Classification	Content
1,1-DICHLORO-1-FLUOROETHANE (HCFC 141B)	CAS: 1717-00-6 EC: 404-080-1	N;R52/53 N;R59	100%

4. FIRST AID MEASURES

Eye If in eyes, hold eyelids apart and flush continuously with running water. Continue flushing until advised to stop by a Poisons Information Centre, a doctor, or for at least 15 minutes.

Inhalation If inhaled, remove from contaminated area. To protect rescuer, use an Air-line respirator or Self Contained Breathing Apparatus (SCBA). Be aware of possible explosive atmospheres. Apply artificial respiration if not breathing. Give oxygen if available.

Skin If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water. Continue flushing with water until advised to stop by a Poisons Information Centre or a doctor.

Ingestion For advice, contact a Poison Information Centre on 13 11 26 (Australia Wide) or a doctor (at once). If swallowed, do not induce vomiting.

Advice to doctor Treat symptomatically. Catecholamines should not be administered.

First aid facilities Eye wash facilities should be available.

5. FIRE FIGHTING MEASURES

Flammability	Non flammable. May evolve toxic gases (chlorides, phosgene, fluorides, hydrogen fluoride, carbon oxides) when heated to decomposition. Vapour may form explosive mixtures with air.
Fire and explosion	Evacuate area and contact emergency services. Toxic gases may be evolved in a fire situation. Remain upwind and notify those downwind of hazard. Wear full protective equipment including Self Contained Breathing Apparatus (SCBA) when combating fire. Use waterfog to cool intact containers and nearby storage areas.
Extinguishing	Use an extinguishing agent suitable for the surrounding fire.
Hazchem code	None Allocated

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	Wear Personal Protective Equipment (PPE) as detailed in Section 8 of this SDS. Clear area of all unprotected personnel. Ventilate area where possible. Contact emergency services where appropriate.
Environmental precautions	Prevent product from entering drains and waterways.
Methods of cleaning up	Contain spillage, then cover/absorb spill with non-combustible absorbent material (vermiculite, sand, or similar), collect and place in suitable containers for disposal.
References	See Sections 8 and 13 for exposure controls and disposal.

7. STORAGE AND HANDLING

Storage	Store in a cool, dry, well ventilated area, removed from incompatible substances, heat or ignition sources and foodstuffs. Ensure containers are adequately labelled and protected from physical damage when not in use. Check regularly for leaks or spills. This product may be stored and transported in the commonly used metals and alloys. Do not store in polystyrene, polymethacrylate and ABS packaging.
Handling	Before use carefully read the product label. Use of safe work practices are recommended to avoid eye or skin contact and inhalation. Observe good personal hygiene, including washing hands before eating. Prohibit eating, drinking and smoking in contaminated areas.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure standards	No exposure standard(s) allocated.
Biological limits	No biological limit allocated.
Engineering controls	Avoid inhalation. Use in well ventilated areas. Where an inhalation risk exists, mechanical extraction ventilation is recommended.

PPE

Eye / Face	Wear splash-proof goggles.
Hands	Wear PVC or rubber gloves.
Body	When using large quantities or where heavy contamination is likely, wear coveralls.
Respiratory	Where an inhalation risk exists, wear a Type A (Organic vapour) respirator. At high vapour levels, wear Self Contained Breathing Apparatus (SCBA) or an Air-line respirator.



9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	COLOURLESS LIQUID
Odour	SLIGHT ETHEREAL ODOUR
Flammability	NON FLAMMABLE
Flash point	NOT RELEVANT

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Boiling point	32°C
Melting point	-103.5°C
Evaporation rate	NOT AVAILABLE
pH	NOT AVAILABLE
Vapour density	4.8 (Air = 1)
Specific gravity	1.235
Solubility (water)	5.35 g/L
Vapour pressure	80 kPa @ 25°C
Upper explosion limit	17.7 %
Lower explosion limit	5.6 %
Autoignition temperature	532°C
Explosive properties	NOT AVAILABLE
Oxidising properties	NOT AVAILABLE
% Volatiles	100 %

10. STABILITY AND REACTIVITY

Chemical stability	Stable under recommended conditions of storage.
Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources.
Material to avoid	Incompatible with oxidising agents (eg. hypochlorites), alkalis (eg. sodium hydroxide), metals, heat and ignition sources.
Hazardous Decomposition Products	May evolve toxic gases (chlorides, phosgene, fluorides, hydrogen fluoride, carbon oxides) when heated to decomposition.
Hazardous Reactions	Hazardous polymerization is not expected to occur.

11. TOXICOLOGICAL INFORMATION

Health Hazard Summary	Asphyxiant vapour - narcotic at high levels. Adverse health effects may result from exposure to high vapour levels or with direct eye or skin contact. Use safe work practices to avoid vapour generation - inhalation. Acute symptoms from over exposure resemble narcosis. Over exposure may result in cardiac arrhythmias (irregular beating or arrest of the heart) in sensitive individuals.
Eye	Low to moderate irritant. Contact may result in irritation, lacrimation, pain and redness.
Inhalation	Irritant - asphyxiant. Over exposure may result in respiratory irritation, coughing, nausea, dizziness and headache. High level exposure may result in dizziness, breathing difficulties and anaesthesia, cardiac arrhythmias, pulmonary oedema and unconsciousness at very high levels.
Skin	Irritant. Contact may result in drying and defatting of the skin, rash and dermatitis.
Ingestion	Harmful. Ingestion may result in nausea, vomiting, abdominal pain, diarrhoea, fatigue, dizziness and unconsciousness.
Toxicity data	1,1-DICHLORO-1-FLUOROETHANE (HCFC 141B) (1717-00-6) LC50 (inhalation) 151 g/m ³ /2 hours (mouse) LD50 (ingestion) > 5 g/kg (rat) LD50 (skin) > 2 g/kg (rat)

12. ECOLOGICAL INFORMATION

Toxicity	No information provided.
Persistence and degradability	No information provided.
Bioaccumulative potential	No information provided.
Mobility in soil	No information provided.
Other adverse effects	Dangerous for the ozone layer. Hydrogenated chlorofluorocarbon compounds (HCFC's) do not persist in the stratosphere to the same degree as chlorofluorocarbons (CFC's). Although ozone depleting, they have a lower ozone depleting effect than CFC's. Release of HCFCs into the environment should be minimised and where possible, recycling of HCFCs is recommended.

13. DISPOSAL CONSIDERATIONS

Waste disposal	OZONE DEPLETING SUBSTANCE. Do not send to landfill. Ensure product is transported to
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approved incineration facility equipped with after burner and scrubber for disposal. Contact the manufacturer for additional information. Prevent contamination of drains and waterways as environmental damage may result.

Legislation Dispose of in accordance with relevant local legislation.

14. TRANSPORT INFORMATION

NOT CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE

	LAND TRANSPORT (ADG)	SEA TRANSPORT (IMDG / IMO)	AIR TRANSPORT (IATA / ICAO)
UN number	None Allocated	None Allocated	None Allocated
Proper shipping name	None Allocated	None Allocated	None Allocated
DG class/ Division	None Allocated	None Allocated	None Allocated
Subsidiary risk(s)	None Allocated	None Allocated	None Allocated
Packing group	None Allocated	None Allocated	None Allocated
Hazchem code	None Allocated		

15. REGULATORY INFORMATION

Poison schedule A poison schedule number has not been allocated to this product using the criteria in the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

Inventory Listing(s) **AUSTRALIA: AICS (Australian Inventory of Chemical Substances)**
All components are listed on AICS, or are exempt.

16. OTHER INFORMATION

Additional information OZONE DEPLETING SUBSTANCES: It is an offence (EPA) to distribute and manufacture the following identified ozone depleting substances unless authorised to do so: 1,1,1-trichloroethane, carbon tetrachloride, CFCs - 11,12,13, 111, 112, 113, 114, 115, 211, 212, 213, 214, 215, 216 & 217. HCFC's-21, 22, 31, 122, 123, 124, 131, 133, 141b, 142, 142b, 151, 221, 222, 223, 224, 225, 225ca, 225cb, 226, 231, 232, 233, 234, 235, 241, 242, 243, 244, 251, 252, 253, 261, 262 & 271. HALONS-1211, 1311, 114 & 115.

PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:

The recommendation for protective equipment contained within this report is provided as a guide only. Factors such as method of application, working environment, quantity used, product concentration and the availability of engineering controls should be considered before final selection of personal protective equipment is made.

HEALTH EFFECTS FROM EXPOSURE:

It should be noted that the effects from exposure to this product will depend on several factors including: frequency and duration of use; quantity used; effectiveness of control measures; protective equipment used and method of application. Given that it is impractical to prepare a ChemAlert report which would encompass all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.

Product Name **HCFC 141B**

Abbreviations	ACGIH	American Conference of Governmental Industrial Hygienists
	CAS #	Chemical Abstract Service number - used to uniquely identify chemical compounds
	CNS	Central Nervous System
	EC No.	EC No - European Community Number
	GHS	Globally Harmonized System
	IARC	International Agency for Research on Cancer
	LD50	Lethal Dose, 50% / Median Lethal Dose
	mg/m ³	Milligrams per Cubic Metre
	OEL	Occupational Exposure Limit
	PEL	Permissible Exposure Limit
	pH	relates to hydrogen ion concentration using a scale of 0 (high acidic) to 14 (highly alkaline).
	ppm	Parts Per Million
	REACH	Regulation on Registration, Evaluation, Authorisation and Restriction of Chemicals
	STEL	Short-Term Exposure Limit
	STOT-RE	Specific target organ toxicity (repeated exposure)
	STOT-SE	Specific target organ toxicity (single exposure)
	SUSMP	Standard for the Uniform Scheduling of Medicines and Poisons
	SWA	Safe Work Australia
	TLV	Threshold Limit Value
	TWA	Time Weighted Average

Revision history

Revision	Description
2.0	Standard SDS Review.
1.0	Initial SDS creation

Report status

This document has been compiled by RMT on behalf of the manufacturer, importer or supplier of the product and serves as their Safety Data Sheet ('SDS').

It is based on information concerning the product which has been provided to RMT by the manufacturer, importer or supplier or obtained from third party sources and is believed to represent the current state of knowledge as to the appropriate safety and handling precautions for the product at the time of issue. Further clarification regarding any aspect of the product should be obtained directly from the manufacturer, importer or supplier.

While RMT has taken all due care to include accurate and up-to-date information in this SDS, it does not provide any warranty as to accuracy or completeness. As far as lawfully possible, RMT accepts no liability for any loss, injury or damage (including consequential loss) which may be suffered or incurred by any person as a consequence of their reliance on the information contained in this SDS.

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End of SDS