SUVA ® 123 Refrigerant

Version 2.1
Revision Date 16.11.2004 Ref. 130000024258

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product information

Trade name	:	SUVA ® 123 Refrigerant
Types	:	ASHRAE Refrigerant number designation: R-123
Use of the Substance/Preparation	:	refrigerant
Company	:	Du Pont (Australia) Ltd 168 Walker Street North Sydney NSW 2060 Australia
Telephone	:	(02) 9923 6111
Telefax	:	(02) 9923 6011
Emergency telephone number	:	(02) 9963 1301

2. COMPOSITION/INFORMATION ON INGREDIENTS

Components

Chemical Name	CAS-No.	Concentration
2,2-Dichloro-1,1,1-trifluoroethane (R123)	306-83-2	100 %

3. HAZARDS IDENTIFICATION

Hazardous classification
Not classified as dangerous goods according to the ADG Code.
Classified as hazardous according to criteria of NOHSC.

Risks
Dangerous for the ozone layer.
May cause harm to breastfed babies.
Possible risk of irreversible effects.
Harmful: danger of serious damage to health by prolonged exposure through inhalation.

Safety data
Refer to manufacturer/supplier for information on recovery/recycling.

Specific hazards
Vapours are heavier than air and can cause suffocation by reducing oxygen available for breathing.
Prolonged skin contact may defat the skin and produce dermatitis.

4. FIRST AID MEASURES

General advice	:	Never give anything by mouth to an unconscious person. Victim to lie down in the recovery position, cover and keep him warm. If breathing is irregular or stopped, administer artificial respiration.
Inhalation	:	Move to fresh air. Keep patient warm and at rest. Artificial respiration and/or oxygen may be necessary.

Skin contact	:	Wash off with warm water. Take off all contaminated clothing immediately.
Eye contact	:	Rinse thoroughly with plenty of water, also under the eyelids. Consult a physician.
Ingestion	:	Do not induce vomiting without medical advice. Drink 1 or 2 glasses of water. Consult a physician.

Notes to physician

Treatment	:	Do not give adrenaline or similar drugs.

5. FIRE-FIGHTING MEASURES

Specific hazards during fire fighting	:	Fire or intense heat may cause violent rupture of packages.
Special protective equipment for fire-fighters	:	In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.
Further information	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Cool containers / tanks with water spray. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	:	Evacuate personnel to safe areas. Ventilate the area. Refer to protective measures listed in sections 7 and 8.
Environmental precautions	:	Prevent further leakage or spillage. Prevent spreading over a wide area (e.g. by containment or oil barriers). Should not be released into the environment.
Methods for cleaning up	:	Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceus earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

7. HANDLING AND STORAGE

Handling

Advice on safe handling	:	Provide sufficient air exchange and/or exhaust in work rooms. For personal protection see section 8. Avoid contact with skin, eyes and clothing.
Advice on protection against fire and explosion	:	Avoid any dust buildup with fluorocarbons and metal mixtures.

Storage

Requirements for storage areas and containers	:	Keep container tightly closed in a dry and well-ventilated place. Store in original container.
Advice on common storage	:	No materials to be especially mentioned.

Other data : No decomposition if stored and applied as directed.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

We are not aware of any national exposure limit.

Engineering measures

Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

Respiratory protection : For rescue and maintenance work in storage tanks use self-contained breathing apparatus. Vapours are heavier than air and can cause suffocation by reducing oxygen available for breathing.

Hand protection : Material: Hydrofluoric acid-resistant and solvent-resistant gloves (gloves made of VITON*).
Glove thickness: 0.7 mm
Wearing time: 2 h

Eye protection : safety glasses

Skin and body protection : protective suit

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. When using, do not eat, drink or smoke. Do not breathe vapours or spray mist. Avoid contact with skin, eyes and clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form	:	liquid
Colour	:	colourless
Odour	:	slight , ether-like
pH	:	neutral
Melting point/range	:	-107.0 °C at 1,013 hPa
Boiling point/range	:	27.6 °C at 1,013 hPa
Flash point	:	does not flash
Ignition temperature	:	730 °C
Explosive properties	:	Not explosive
Vapour pressure	:	971 hPa at 25 °C
Density	:	1.46 g/cm3 at 25 °C, (as liquid)

Density	:	1.475 g/cm3 at 15 °C, (as liquid)
Density	:	0.0058 g/cm3 at 27.9 °C (1,013 hPa)
Water solubility	:	3.9 g/l at 25 °C
Viscosity, dynamic	:	0.449 mPa/s at 25 °C
Relative vapour density	:	5.3

10. STABILITY AND REACTIVITY

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.
Materials to avoid	:	alkali metals, alkaline earth metals, powdered metals, powdered metal salts
Hazardous decomposition products	:	fluorinated hydrocarbons, hydrogen fluoride, carbon dioxide (CO2), Carbon monoxide, Hydrogen chloride gas, halogenated compounds
Hazardous reactions	:	No decomposition if stored and applied as directed.

11. TOXICOLOGICAL INFORMATION

Acute oral toxicity • 2,2-Dichloro-1,1,1-trifluoroethane (R123)	:	ALD/rat : 9,000 mg/kg
Acute inhalation toxicity • 2,2-Dichloro-1,1,1-trifluoroethane (R123)	:	LC50/4 h/rat : 46.7 mg/l
Acute dermal toxicity • 2,2-Dichloro-1,1,1-trifluoroethane (R123)	:	LD50/rabbit : > 2,000 mg/kg
Skin irritation	:	According to the classification criteria of the European Union, the product is not considered as being a skin irritant. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in desiccation of the skin.
Eye irritation	:	Mild eye irritation
Sensitization	:	Animal test did not cause sensitization by skin contact.
Human experience	:	Excessive exposures may affect human health, as follows: Inhalation:severe shortness of breath, narcosis, Irregular cardiac activity
Further information	:	Rapid evaporation of the liquid may cause frostbite.

12. ECOLOGICAL INFORMATION

Ozone depletion potential	:	0.02 - 0.06
Global warming potential (CO2 = 1)	:	120

13. DISPOSAL CONSIDERATIONS

Product	:	Can be used after re-conditioning. If recycling is not practicable, dispose of in compliance with local regulations. The product should not be allowed to enter drains, water courses or the soil.
Contaminated packaging	:	If recycling is not practicable, dispose of in compliance with local regulations.

14. TRANSPORT INFORMATION

Further Information	:	Not classified as dangerous goods according to the ADG Code.

15. REGULATORY INFORMATION

Labelling

Symbol(s)	:	N Xn	Dangerous for the environment Harmful
R-phrase(s)	:	R59 R64 R68 R48/20	Dangerous for the ozone layer. May cause harm to breastfed babies. Possible risk of irreversible effects. Harmful: danger of serious damage to health by prolonged exposure through inhalation.
S-phrase(s)	:	S59	Refer to manufacturer/supplier for information on recovery/recycling.

National regulatory information:

SUSDP	:	No poison schedule number allocated

16. OTHER INFORMATION

Sources of key data used to compile the datasheet:

1. National Code of Practice for the Preparation of Material Safety Data Sheets 2nd Edition [NOHSC:2011(2003)]
2. Approved Criteria for Classifying Hazardous Substances [NOHSC:1008(1999)]

3. List of Designated Hazardous Substances [NOHSC:10005(1999)]
4. Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:1003(1995)]
5. Australian Dangerous Goods Code, No. 6 [National Road Transport Commission]
6. Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP), No. 18 [NDPSC:May 2003]
7. National Code of Practice for the Labelling of Workplace Substances [NOHSC:2012(1994)]

Department:

Du Pont (Australia) Ltd
168 Walker Street
North Sydney NSW 2060
Australia

Further information:

Before use read DuPont's safety information., For further information contact the local DuPont office or DuPont's nominated distributors., ® DuPont's registered trademark

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