

SAFETY DATA SHEET

according to 1907/2006/EC, Article 31

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R407C

Revision 0
Revision date

1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND THE COMPANY

Product name R407C
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2. HAZARDS IDENTIFICATION

Main hazards No Significant Hazard.
Other hazards Liquified Gas.
Rapid evaporation of the liquid may cause frostbite.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous ingredients

	Conc.	CAS	EINECS	Symbols/Risk phrases
1,1,1,2-Tetrafluoroethane (1,1,1,2-Tetrafluoroethane (HFC 134a))	50 - 60%	811-97-2	212-377-0	
Pentafluoroethane	20 - 30%	354-33-6	206-557-8	
Difluoromethane (R32)	20 - 30%	75-10-5	200-839-4	F+; R12

4. FIRST AID MEASURES

Skin contact Allow to evaporate. Wash off immediately with plenty of soap and water. Remove contaminated clothing. Seek medical attention if irritation or symptoms persist.

Eye contact Keep eyelids open to allow evaporation of the product. Rinse immediately with plenty of water for 15 minutes holding the eyelids open. Seek medical attention if irritation or symptoms persist.

Inhalation Move the exposed person to fresh air. If breathing is difficult give oxygen. Seek medical attention if irritation or symptoms persist.

Ingestion Not applicable.

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5. FIRE FIGHTING MEASURES

Extinguishing media	Use extinguishing media appropriate to the surrounding fire conditions. Cool fire exposed containers with waterspray.
Fire hazards	Heating produces hazardous fumes.
Protective equipment	Wear self contained breathing apparatus and protective clothing.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	Ensure adequate ventilation of the working area. Evacuate personnel to a safe area. Prevent further spillage if safe. Keep public away from danger area. Keep upwind. Eliminate all sources of ignition.
Environmental precautions	Should not be released into the environment.
Clean up methods	Allow to evaporate. Do not allow product to enter drains.

7. HANDLING AND STORAGE

Handling	Ensure adequate ventilation of the working area. Keep away from sources of ignition - No smoking. Keep away from heat. Use only equipment and materials which are compatible with the product.
Storage	Keep in a cool, dry, well ventilated area. Store in original container. Keep away from incompatible materials.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure limits

1,1,1,2-Tetrafluoroethane	WEL 8-hr limit ppm: 1000	WEL 8-hr limit mg/m ³ : 4240
(1,1,1,2-Tetrafluoroethane (HFC 134a))	WEL 15 min limit ppm: -	WEL 15 min limit mg/m ³ : -

Engineering measures	Ensure adequate ventilation of the working area.
Occupational exposure controls	Apply technical measures to comply with the occupational and workplace exposure limits. Use only in an area equipped with a safety shower. Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feedingstuffs.
Respiratory protection	Use self contained breathing apparatus in all circumstances where there is medium confinement, insufficient oxygen, in cases of uncontrolled emissions and in all circumstances where standard respiratory protection does not provide adequate protection. Use only respiratory protection the conforms to international / national standards. In the case of vapour formation use a respirator with an approved filter.
Hand protection	Wear suitable gloves. Ensure the permeability and break through times are compatible with the specific workplace conditions i.e. duration of contact and mechanical strain.
Eye protection	Approved safety goggles. In case of splashing, wear: Face shield.
Protective equipment	Wear protective clothing. Apron (Plastic or rubber) Rubber boots. Wash all contaminated clothing before reuse.

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9. PHYSICAL AND CHEMICAL PROPERTIES

Description	Liquified Gas.
Colour	Colourless.
Odour	Slight.
Boiling point	-43.9°C
Relative density	1.16 g/cm ³
Vapour density	3 (Air = 1)

10. STABILITY AND REACTIVITY

Stability	Stable under normal conditions. Vapours are heavier than air.
Conditions to avoid	Heat.
Materials to avoid	Alkali metals. Oxidising agents.
Hazardous decomposition products	Hydrogen fluoride. Carbon oxides.

11. TOXICOLOGICAL INFORMATION

Toxicological information

1,1,1,2-Tetrafluoroethane	Inhalation Rat LC50/4H h = 1500 gm/m ³ Inhalation Mouse LC50/2H h = 1700 gm/m ³
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Acute toxicity	In cases of high concentration inhalation may cause: Narcosis, Asphyxia, Cardiac Arrhythmia. Rapid evaporation of the liquid may cause frostbite.
Corrosivity	May cause irritation to eyes. May cause irritation to skin.

12. ECOLOGICAL INFORMATION

Ecotoxicity	Global Warming Potential: 1 653.
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1,1,1,2-Tetrafluoroethane	Daphnia EC50/48h = 980 mg/l Rainbow trout LC50/96h = 450 mg/l
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13. DISPOSAL CONSIDERATIONS

General information	Dispose of in compliance with all local and national regulations.
Disposal methods	Refer to manufacturer / supplier for information on recovery / recycling.

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UN 3340	Packing group -
Class 2	Hazard ID 20
Proper Shipping Name	
REFRIGERANT GAS R 407C .	

IMDG

UN 3340	Packing group -
Class 2	Marine pollutant NO
EmS Code F-C S-V	

IATA

UN 3340	Packing group -
Class 2	Subsidiary risk -
Packing Instruction 200 (Cargo)	Maximum quantity 150 kg
Packing Instruction 200 (Passenger)	Maximum quantity 75 kg

15. REGULATORY INFORMATION

Risk phrases	No Significant Hazard.
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16. OTHER INFORMATION

Text of risk phrases in Section 3	R12 - Extremely flammable.
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Further information	The information supplied in this Safety Data Sheet is designed only as guidance for the safe use, storage and handling of the product. This information is correct to the best of our knowledge and belief at the date of publication however no guarantee is made to its accuracy. This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any other process.
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