Material Safety Data Sheet

Refrigerant R410a (RXSOL-66-6625-010)

1. Product and Company Identifaction

Product Name	Freon Refrigerant R410a
Part Number	RXSOL-66-6625-010

Company Details:
RX MARINE INTERNATIONAL
105, A wing , BSEL , TECH PARK.
VASHI ,NEW BOMBAY 400703 INDIA

Stock Point : Mumbai, Kolkata, Chennai, Gandhidham, Visakhapatnam, Fujairah, Muscat

Phone	+91 22 27815541 / 42
Fax	+91 22 2781 1318 :::AOH :0091 9821214367
Email	123@rxmarine.com
Website	www.rxmarine.com

2. Composition / informationon ingredients

Ingrident	CAS Number	Weight Percentage
Difluoromethane	75-10-5	50%
Pentafluoroethane	354-33-6	50%

3. Hazards Identification

Main Hazards Adverse	Contains a liquefied gas. Contact of liquid health effects may cause frostbite and injury to the cornea. In high concentrations may cause asphyxiation
Chemical hazards	Heating will cause a rise in pressure with a risk of bursting. On Combustion, toxic gases are released
Biological hazards	Contact with liquid could cause frost burns
Vapour inhalation	High exposures may cause an abnormal heart rhythm and prove suddenly fatal. May have a narcotic effect, very high concentrations may cause anaesthetic effects and asphyxiation
Eye Contact	Vapour - unknown effect Liquid - could cause serious burns
Skin Contact	Vapour - unknown effect
Ingestion	Liquid - see vapour inhalation above

4. First Aid Measures

Skin	Take off all contaminated clothing immediately if not stuck to the skin. Flush area with lukewarm water. Do not use hot water. If frostbite has occurred call a physician.
Eyes	Hold eyelids apart and flush eyes with plenty of water for at least 15 minutes. Get medical attention.
Inhalation	Remove from exposure, lie down. Move to fresh air. Keep patient warm and at rest. Artificial respiration and/or oxygen may be necessary. Consult a physician.
Ingestion	This is not considered a potential route of exposure.
General Advice	Never give anything by mouth to an unconscious person. When symptome persist or in all cases of doubt seek medical advice.

5. Fire-fighting Measures

Extinguishing media:	Water spray, Foam, Dry chemical Carbon dioxide (CO2). Use extinguishing measures that are appropriate to local and surrounding environment. Cool cylinders/tanks with water spray.
Special hazards arising from the mixture	Vapours may form explosive mixtures with air. Vapours are heavier than air and may spread along floors. Vapours or gases may travel considerable distances to ignition source and flash back. Fire or intense heat may cause violent rupture of packages. Hazardous thermal decomposition products: carbon oxides, hydrogen fluoride, carbonyl fluoride
Advice for fire-fighters:	In the event of fire wear self-contained breathing apparatus. Use personal protective equipment. Wear neoprene gloves during cleaning work after a fire.

6. Accidental Release Measures

Personal	Avoid contact with skin and eyes. Do not breathe gas. For further information refer to 8 “Exposurecontrols/Personal Protection” Heavy vapours. Shut off low-level opening in the vicinity (ventilation shafts, drains) Prevent the product from entering cellars, basements of pits. Stop the leak. Ventilate spillage area and basements
Environmental	Prevent the product from spreading into the precautions environment. Contain the spilled material by bunding
Small spills	Shut off source of product. Ventilate area
Large spills	Evacuate the area. Shut off the source of the spill if this can be done without risk. Restrict access to the area until completion of the clean-up procedure. Ventilate the area using forced-draft if necessary.

7. Handling and Storage

Handling	Advice on handling: Avoid breathing vapours or mist. Avoid liquid contact with skin and clothing. Provide sufficient air exchange and/or exhaust in work rooms. Advice on protection against fire and explosion: No special measures against fire required.
Storage	Do not drag, slide or roll cylinders. Never attempt to lift cylinder by its cap. Use a check valve or trap in the discharge line to prevent hazardous back flow into the cylinder. Keep at temperature not exceeding 52oC. Keep cylinders tightly closed in a dry, cool and wellventilated place.
Storage temperature:	Less than 52oC .

8. Exposure controls and personal protection

Occupational	As R410A is a simple asphyxiant, avoid exposure hazards any areas where spillage has taken place. Only enter once testing has proved the atmosphere to be safe, and remember that the gas is heavier than air
Engineering	Engineering control measures are preferred to control measures reduce exposures to oxygen depleted atmospheres. General methods include forced-draft ventilation, separate from other exhaust ventilation systems. Ensure that sufficient fresh air enters at, or near, floor level.
Personal protection	Self-contained breathing apparatus should always be worn when entering area where oxygen depletion may have occurred. Safety goggles, gloves and shoes or boots should be worn when handling cylinders
Skin	No known effect.

9. Physical and chemical properties

Colour:	Clear colourless liquid and vapour.
Odour :	Ethereal
Molecular weight:	72.59 g/mole
Boiling Point/range:	- 51.2 to -51.1oC (boiling range)
Flash Point:	Does not flash. Non-flammable
Vapour pressure:	14.706 Bar (14706 hPa) at 20oC
Liquid Density:	1081 kg/m3 at 20oC

10. Stability and reactivity

Conditions to avoid	The dilution of oxygen concentration in the atmosphere to levels which cannot support life Never use cylinders as rollers or supports, or for any other purpose than the storing of R410A. Never expose the cylinders to excessive heat, as this may cause sufficient build-up of pressure to rupture the cylinders
Incompatible	Since the performance of plastic materials is affected by polymer variations, compounding agents, fillers, and moulding processes, verifying compatibility using actual fabricated parts under end-use conditions is advised. The effects on specific elastomers depend on the nature of the polymer, the compounding formulation used and the curing of vulcanizing conditions. Actual samples should be tested under end-use conditions before specifying elastomers for critical components
Hazardous Decomposition	On combustion or on thermal decomposition (pyrolysis) releases: toxic gases (Fluorinated compounds) (hydrofluoric acid)

11. Toxicological information

Acute Toxicity (TWA 8+12 hr)

Skin & eye contact No known effect

Chronic Toxicity No known effect

Carcinogenicity No known effect

Mutagenicity No known effect

Reproductive Hazards No known effect

(For further information see Section 3. Adverse health effects)

12. Ecological information

Prevent the product from spreading into the environment

13. Disposal considerations

Disposal Methods	Do not allow the product to be released into the environment. Consult the manufacturer of supplier for information regarding recovery and recycling of the product.

14. Transport information

UN Number	UN 3163
Proper Shipping Name	Liquefied gas, n.o.s., (Pentafluoroethane, Difluoromethane)
Hazard Class	2.2
Packing Group	Not applicable

15. Regulatory information

TOXIC SUBSTANCES CONTROL ACT (TSCA)	
Tsca Inventory Status	Listed on the TSCA inventory
Other Tsca Issues	Subject to Section 12(b) export notification. May contain 0-10ppm Ethane, 2- chloro-1,1,1-trifluoro, CAS#75-88-7
SARA TITLE III / CERCLA	Reportable Quantities" (RQs) and/or "Threshold Planning Quantities" (TPQs) exist for the following ingredients.
Ingredient Name Sara /	No ingredients listed in this section.Spills or releases resulting in the loss of any ingredient at or above its RQ requires immediate notification to the National Response Center USA [(800) 424-8802] and to your Local Emergency Planning Committee.
Section 311 Hazard Class	Immediate Pressure
Sara 313 Toxic Chemicals	The following ingredients are SARA 313 "Toxic Chemicals". CAS numbers and weight percents are found in Section 2. . Ingredient Name Comment Chlorodifluoromethane (HCFC-22) None
State Right-To-Know	In addition to the ingredients found in Section 2, the following are listed for state right-to-know purposes. Ingredient Name Weight % Comment No ingredients listed in this section
Additional Regulatory Information	R-410A is subject to U.S. Environmental Protection Agency Clean Air Act Regulations at 40 CFR Part 82.WARNING: Do not vent to the atmosphere. To comply with provisions of the U.S. Clean Air Act, any residual must be recovered. Contains Pentafluoroethane (HFC-125) and Difluoromethane (HFC-32), greenhouse gases which may contribute to global warming.
WHMIS Classification (Canada):	This product has been evaluated in accordance with the hazard criteria of the CPR and the SDS contains all the information required by the CPR.
Foreign Inventory Status	EU – EINECS # 2065578 – HFC-125
HMIS Classification	Health – 1, Flammability – 1, Reactivity – 0
NFPA Classification	Health – 2, Flammability – 1, Reactivity – 0
OSHA regulations	For compressed gases: 29 CFR 1910.101

DOT classification	Per 49 CFR 172.101
Clean Air Act	Toxicity information per PAFT Testing

16. Other information

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if **Rx Marine International** has been advised of the possibility of such damages.