

1. Product and Company Identification

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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

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2. Composition / Information on ingredients

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

3. Hazards Identification

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Main Hazards Adverse	Contains a liquefied gas. Contact of liquid health effects may cause frostbite and injury to the cornea. In high concentration 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 concentration 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

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Skin	Take off all contaminated clothing immediately if not stuck to the skin. Wash with plenty of water. Do not use hot water. If frostbite has occurred call a doctor.
Eyes	Hold eyelids apart and flush eyes with plenty of water for at least 15 minutes. Seek medical attention.
Inhalation	Remove from exposure, lie down. Move to fresh air. Keep warm. If breathing is difficult, 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. If in doubt seek medical advice.

5. Fire-fighting Measures

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Extinguishing media:	Water spray, Foam, Dry chemical Carbon dioxide (CO ₂). Use appropriate to local and surrounding environment. Cool cylinders
Special hazards arising from the mixture	Vapours may form explosive mixtures with air. Vapours are heavier than air and may travel considerable distance along floors. Vapours or gases may travel considerable distance back. Fire or intense heat may cause violent rupture of pack. Decomposition products: carbon oxides, hydrogen fluoride, etc.
Advice for fire-fighters:	In the event of fire wear self-contained breathing apparatus. Wear neoprene gloves during cleaning work after a fire.

6. Accidental Release Measures

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Personal	Avoid contact with skin and eyes. Do not breathe gas. For further information refer to 8.2.2 Exposure controls/Personal protection. Heavy vapours. Shut off low-level opening in the vicinity (ventilation shafts, drains) Prevent the product from entering basements or pits. Stop the leak. Ventilate spillage area and basements
Environmental	Prevent the product from spreading into the surrounding 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 clean-up procedure. Ventilate the area using forced-draft if necessary.

7. Handling and Storage

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Handling	Advice on handling: Avoid breathing vapours or mist. Avoid liquid contact with skin and clothing. Provide sufficient ventilation 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 52°C. Keep cylinders tightly closed in a well-ventilated place.
Storage temperature:	Less than 52°C .

8. Exposure controls and personal protection

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Occupational	As R410A is a simple asphyxiant, avoid exposure hazards. Only enter once testing has proved the atmosphere to be safe than air
Engineering	Engineering control measures are preferred to control the atmosphere. General methods include forced-draft ventilation systems. Ensure that sufficient fresh air enters the area
Personal protection	Self-contained breathing apparatus should always be used. Depletion may have occurred. Safety goggles, gloves should be worn when handling cylinders
Skin	No known effect.

9. Physical and chemical properties

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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

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Conditions to avoid	The dilution of oxygen concentration in the atmosphere to levels which cannot support life Never use cylinders as roll over or for any other purpose than the storing of R410A. Never expose the cylinders to excessive heat, as this may cause sufficient pressure to rupture the cylinders
Incompatible	Since the performance of plastic materials is affected by polymer variations, compounding agents, fillers, and moulding conditions, 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

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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

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Prevent the product from spreading into the environment

13. Disposal considerations

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Disposal Methods Do not allow the product to be released into the environment. For information regarding recovery and recycling of the product, contact your local waste management authority.

14. Transport information

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

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
 Chlorodifluoro methane (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

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