

SAFETY DATA SHEET

Regulation (EC) No 1907/2006 (REACH), Annex II
(COMMISSION REGULATION (EU) No 453/2010)

Version 1
Product Name R410A

Issue Date 12-Jun-2014
Revision date 12-Jun-2014

SECTION 1: Identification of the substance /mixture and of the company/undertaking

1.1. Product identifier

Product Name R410A
REACH registration number No information available

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended Use To replace R22, mainly used for low temperature refrigeration system.
Uses advised against No information available

1.3. Details of the supplier of the safety data sheet

Supplier Sinochem Environmental Protection Chemicals (Taicang) Co., Ltd
Address No.18, Binjiang Road, Shihua Park, The Port Development Zone Taicang, Jiangsu, PR of China
Phone +86-512-53713100
FAX +86-512-53713199
E-mail

Importer
Address
Postal Code
Phone
FAX
E-mail

1.4. Emergency telephone number

+86-532-83889090

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]
Gases under pressure Liquefied gas - (H280)

Classification according to Directive 67/548/EEC or 1999/45/EC
Not classified

2.2. Label elements

Symbols/Pictograms



Signal word

Warning

Hazard Statements

H280 - Contains gas under pressure; may explode if heated

Precautionary Statements

P410 + P403 - Protect from sunlight. Store in a well-ventilated place

2.3. Other hazards

No information available

SECTION 3: Composition/information on ingredients

3.1. Mixture

Chemical Name	EC No	CAS No	Weight-%	Classification according to Directive 67/548/EEC or 1999/45/EC	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Pentafluoroethane	-	354-33-6	49.5-51.5	Not classified	Compressed gas H280
Methylene fluoride	-	75-10-5	48.5-50.5	F+; R12	Flam. Gas 1 H220 Liquefied gas H280

SECTION 4: First aid measures

4.1. Description of first aid measures

General advice

Remove contaminated clothing and shoes. If symptoms persist, call a physician.

Inhalation

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. (Get medical attention immediately if symptoms occur.).

Skin Contact

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. 40-42 °C fresh water rewarming. If skin irritation persists, call a physician.

Eye contact

Not an expected route of exposure. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Ingestion

Not an expected route of exposure.

4.2. Most important symptoms and effects, both acute and delayed

None known

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures**5.1. Extinguishing media****Suitable extinguishing media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media

No information available

5.2. Special hazards arising from the substance or mixture

In case of fire, can lead to release of irritating and toxic gases and vapors: hydrogen fluoride, carbonyl fluoride.

In case of strong, may cause cracking or explosion

5.3. Advice for firefighters

Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Evacuate personnel to safe areas

Ensure adequate ventilation, especially in confined areas

Remove all sources of ignition

Use personal protection recommended in Section 8

6.2. Environmental precautions

Avoid release to the environment

6.3. Methods and material for containment and cleaning up

Ventilate affected area

6.4. Reference to other sections

See Section 7 for more information

See section 8 for more information

See section 13 for more information

SECTION 7: Handling and storage**7.1. Precautions for safe handling**

Handle in accordance with good industrial hygiene and safety practice
Ensure adequate ventilation, especially in confined areas
Keep away from heat, sparks, flame and other sources of ignition
Avoid contact with skin and eyes
Wash thoroughly after handling
When handling or unloading, be gentle. Do not damage the steel cylinder and accessories.
Use personal protection recommended in Section 8

7.2. Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place
Keep the temperature below 52°C.
Keep away from heat and sunlight.
Store in accordance with local regulations
Keep away from food, drink and animal feeding stuffs

7.3. Specific end use(s)

Apart from the uses mentioned in SECTION 1.2 no other specific uses are stipulated.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Pentafluoroethane

Sweden: TWA 2500mg/m³

Derived No Effect Level (DNEL)

No information available.

Predicted No Effect Concentration (PNEC)

No information available.

8.2. Exposure controls

Engineering Controls

Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

Eye/face protection	Wear chemical safety goggles if necessary.
Hand Protection	Wear protective gloves
Skin and body protection	Suitable protective clothing
Respiratory protection	The concentration in air exceed standard, wear self- absorption filter type respirator.

Environmental exposure controls

Do not allow into any sewer, on the ground or into any body of water

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Liquefied gas
Color	Colorless
Odor	Odorless
Odor Threshold	Not available
pH	Not available
Melting point/freezing point	Not available
Boiling point / boiling range	-51.53 °C (101.3 kPa)
Flash point	Not available
Evaporation rate	Not available
Flammability (solid, gas)	Not flammable
Flammability Limit in Air	Not available
Vapor Pressure	1664kPa (25°C)
Vapor density	Not available
Density	Not available
Relative density	1.062 (101.3 kPa)
Bulk density	Not available
Specific gravity	Not available
Water solubility	Insoluble in water
Partition coefficient	Not available
Autoignition temperature	Not available
Decomposition temperature	Not available
Kinematic viscosity	Not available
Dynamic viscosity	Not available
Explosive properties	Not an explosive
Oxidizing properties	Not available
Critical temperature	72.13°C
Critical pressure	4.920 MPa

9.2. Other information

No information available

SECTION 10: Stability and reactivity**10.1. Reactivity**

No information available.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

None under normal processing.

10.4. Conditions to avoid

Strong heating.

10.5. Incompatible materials

Strong oxidizing agents.

10.6. Hazardous decomposition products

Hydrogen fluoride, carbonyl fluoride

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity

No data available.

Skin corrosion/irritation

Long time or repeated contact with the product, can cause subcutaneous fat loss, resulting in non allergic dermatitis or skin absorption.

Serious eye damage/eye irritation

Short time splash or steam contact may cause slight eye irritating.

Sensitization

No sensitization responses were observed.

Germ cell mutagenicity

No information available.

Carcinogenicity

Not classified

Reproductive toxicity

No information available.

STOT - single exposure

No information available.

STOT - repeated exposure

No information available.

Aspiration hazard

No information available.

SECTION 12: Ecological information

12.1. Toxicity

Pentafluoroethane

Fish: LC50= 450 mg/L/ 48 h(Salmo gairdneri)

Aquatic invertebrates: EC50 > 200 mg/L/ 48 h(Daphnia magna)

Algae: EC50= 142 mg/L/ 96 h(green algae)

Methylene fluoride

Fish: LC50= 1507 mg/L/ 96 h(freshwater fish)

Aquatic invertebrates: EC50= 652 mg/L/ 48 h(daphnid)

Algae: EC50= 142 mg/L/ 96 h(green algae)

12.2. Persistence and degradability

No information available.

12.3. Bioaccumulative potential

No information available.

12.4. Mobility in soil

No information available

12.5. Results of PBT and vPvB assessment

PBT/vPvB assessment information is not available as chemical safety assessment not conducted.

12.6. Other adverse effects

No information available

SECTION 13: Disposal considerations**13.1. Waste treatment methods**

Waste from residues/unused Disposal should be in accordance with applicable regional, national and products local laws and regulations

Contaminated packaging Empty containers should be taken for local recycling, recovery or waste disposal.

SECTION 14: Transport information

14.1 UN Number	3163
14.2 Proper shipping name	LIQUEFIED GAS, N.O.S.(contains methylene fluoride, pentafluoroethane)
14.3 Hazard Class	2.2
14.4 Packing Group	None
14.5 Environmental hazards	Not marine pollutant

14.6 Special precautions No information available

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Take note of Directive 94/33/EC on the protection of young people at work

Take note of Directive 92/85/EC on the protection of pregnant and breastfeeding women at work

International Inventories

Component	TSCA	DSL/NDSL	EINECS/ELINCS	ENCS	IECSC	KECL	PICCS	AICS
Pentafluoroethane 354-33-6	X	-	X	X	X	X	X	X
Methylene fluoride 75-10-5	X	-	X	X	X	X	X	X

"-" Not Listed

"X" Listed

15.2. Chemical safety assessment

No information available

SECTION 16: Other information

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Issue Date 12-Jun-2014
Revision date 12-Jun-2014
Revision Note Not applicable

Key or legend to abbreviations and acronyms used in the safety data sheet

TWA - TWA (time-weighted average)

STEL - STEL (Short Term Exposure Limit)

Ceiling - Maximum limit value

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

Full text of H-Statements referred to under section 3

H280 Contains gas under pressure; may explode if heated.

H220 Extremely flammable gas.

Full text of R-phrases referred to under sections 2 and 3

R12 Extremely flammable.

Disclaimer

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The 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 process, unless specified in the text.

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