

# 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  
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## 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 david@impecca.com

Importer Impecca  
Address 171 47th St., Brooklyn, NY  
Postal Code 11232  
Phone 866-954-4111  
FAX 718-369-3333  
E-mail service@impecca.com

### 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/m<sup>3</sup>

#### 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**

<b>Appearance</b>	Liquefied gas
<b>Color</b>	Colorless
<b>Odor</b>	Odorless
<b>Odor Threshold</b>	Not available
<b>pH</b>	Not available
<b>Melting point/freezing point</b>	Not available
<b>Boiling point / boiling range</b>	-51.53 °C (101.3 kPa)
<b>Flash point</b>	Not available
<b>Evaporation rate</b>	Not available
<b>Flammability (solid, gas)</b>	Not flammable
<b>Flammability Limit in Air</b>	Not available
<b>Vapor Pressure</b>	1664kPa (25°C)
<b>Vapor density</b>	Not available
<b>Density</b>	Not available
<b>Relative density</b>	1.062 (101.3 kPa)
<b>Bulk density</b>	Not available
<b>Specific gravity</b>	Not available
<b>Water solubility</b>	Insoluble in water
<b>Partition coefficient</b>	Not available
<b>Autoignition temperature</b>	Not available
<b>Decomposition temperature</b>	Not available
<b>Kinematic viscosity</b>	Not available
<b>Dynamic viscosity</b>	Not available
<b>Explosive properties</b>	Not an explosive
<b>Oxidizing properties</b>	Not available
<b>Critical temperature</b>	72.13°C
<b>Critical pressure</b>	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 &gt; 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 products      Disposal should be in accordance with applicable regional, national and local laws and regulations

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

**SECTION 14: Transport information**

<b>14.1 UN Number</b>	3163
<b>14.2 Proper shipping name</b>	LIQUEFIED GAS, N.O.S.(contains methylene fluoride, pentafluoroethane )
<b>14.3 Hazard Class</b>	2.2
<b>14.4 Packing Group</b>	None
<b>14.5 Environmental hazards</b>	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  
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**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  
**ACS** - 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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