



Zhejiang Fotech International Co., Ltd  
**Material Safety Data Sheet**

**1. CHEMICAL PRODUCT/COMPANY IDENTIFICATION**

**MATERIAL IDENTIFICATION**

MSDS Number: FOTECH009  
Molecular Weight: 89.86

**TRADENAMES AND SYNONYMS**

R406A

**COMPANY IDENTIFICATION**

**MANUFACTURER'S/DISTRIBUTOR'S NAME**

Zhejiang Fotech International Co., Ltd.  
No.139, Renmin West RD., Jinhua, Zhejiang, P.R. China-321000

**PHONE NUMBERS**

Product Information: +86-571-87918266  
Medical Emergency: +86-571-87085066

**2. COMPOSITION/INFORMATION ON INGREDIENTS**

**COMPONENTS**

Material:	R22	R142b	R600a
CAS Number:	75-45-6	75-68-3	75-28-5
Weight %:	55%	41%	4%

**3. HAZARD IDENTIFICATION**

**Potential Health Effects**

It presents an insignificant hazard to human health. In case of decomposition, releases dangerous products.



### **SKIN CONTACT (GAS)**

None (Liquefied gas). Cold sensation followed by redness of the skin. Risk of frostbite.

### **EYES CONTACT (GAS)**

None (Liquefied gas). Severe eye irritation, watering, redness and swelling of the eyelids.  
Risk of burns (frostbite).

### **INHALATION**

At high concentrations, it will have the risk of narcosis, cardiac arrhythmia and asphyxia by lack of oxygen.

### **INGESTION (GAS)**

Impossible risk.

## **4. FIRST AID MEASURES**

### **SKIN CONTACT**

In case of contact, allow product to evaporate. Rinse with lukewarm running water and consult with a physician in case of persistent pain or redness.

### **EYES CONTACT**

In case of contact, immediately flush eyes with plenty of water for 15 minutes. Call a physician.

### **INHALATION**

Immediately remove to fresh air. Keep person calm. Call a physician. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

### **INGESTION**

General recommendations. Risk not possible (gas).

## **5. FIRE-FIGHTING MEASURES**

### **Common extinguishing methods**

In case of fire in close proximity, all means of extinguishing are acceptable.

### **Specific hazards**

Non-flammable. Formation of dangerous gas/vapors in case of decomposition. Gas/vapor

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combustion possible in presence of air in very particular conditions.

### **Protective measures in case of intervention**

Evacuate all non-essential personnel. In all cases wear self-contained breathing apparatus when in close proximity or intervention wear acid resistant suit. After intervention proceed to clean the equipment (take a shower, remove clothing carefully, clean and check). Intervention only by capable personnel who are trained and aware of the Hazard of the product.

### **Other precautions**

If safe to do so, remove the exposed containers, or cool with large quantities of water. After the fire, ventilate and clean the rooms before re-entry.

## **6. ACCIDENTAL RELEASE MEASURES**

### **Precautions**

Local ventilation. If safe to do so, without exposing the personnel, try to stop the spillage. Avoid materials and products which are incompatible with the product.

### **Clean up methods**

Let the product evaporate. Prevent the product from entering sewers or confined places.

### **Precautions for protection of the environment**

Avoid discharges into the environment

## **7. HANDLING AND STORAGE**

### **HANDLING**

Avoid breathing high concentrations of vapor. Provide adequate ventilation for storage, handling, and use, especially for enclosed or low spaces. Avoid contact of liquid with eyes and prolonged skin exposure.

### **STORAGE**

Store in a ventilated, cool area. Keep away from heat sources and reactive substances.

### **Packing**

Steel



## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Exposure limit for country

SAEL (Solvay)	1994-1995
TWA (ppm)	1000
Chlorodifluoromethane	
TLV (ACGIH-USA)	1994-1995
TWA (ppm)	1000
TWA (mg/m <sup>3</sup> )	3540
LTEL:	ppm 10

### Personal

None of the local exhaust ventilation is adequate.

### Protection

Self contained breathing apparatus if risk of decomposition, in medium confinement/ insufficient oxygen / in case of large uncontrolled emissions / in all circumstances when the mask and cartridge do not give adequate protection. Use only respiratory protection that conforms to international /national standards. Protection gloves, chemical resistant, polyvinylalcohol. Wear protective goggles for all industrial operations. Chemical proof goggles / face shield if risk of splashing. For skin protection wear apron / boots of neoprene if risk of splashing. Shower and eye wash stations. Gloves, overalls and boots have to be double layered (protection against cold temperature). Consult your industrial hygienist or safety manager for the selection of personal protective equipment suitable for the working conditions.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Physical Data

Boiling Point:	-32.7 C
Vapor Pressure:	5.62bar at 20 C
Vapor Density:	>3 (Air = 1.0)
Solubility in Water:	4.9 g/l
PH:	Neutral
Odor:	Slight ethereal
Form:	Liquid
Color:	Clear, colorless
Specific gravity	1.13 (D25/4)



## 10. STABILITY AND REACTIVITY

### Chemical Stability

Stable under certain conditions.

Decomposition produces dangerous gases, upon contact with flames or hot metallic surfaces.

### Conditions to Avoid

Heat/sources of heat.

### Materials to avoid

Metallic powders, alkaline-earth metals, alkaline metals and their alloys.

### Decomposition

Decomposition products are hazardous. This material can be decomposed by high temperatures (open flames, glowing metal surfaces, etc.) forming hydrogen fluoride, hydrochloric acid, phosgene and fluorophosgene. These materials are toxic and irritating. Contact should be avoided.

## 11. TOXICOLOGICAL INFORMATION

### General

LC50/1h (ppm) LD50 (Rat) – Ingestion of 7340 mg/kg

## 12. ECOLOGICAL INFORMATION

### General

Product is persistent in air (atmospheric lifetime: 14 years). Product is not significant hazardous for the aquatic environment as: Considerable volatility. No bioaccumulation.

## 13. DISPOSAL CONSIDERATIONS

### General

Comply with local and national regulations. Contact the producer for recycling. To avoid treatment, as far as possible, use dedicated containers.

## 14. TRANSPORT INFORMATION

### Shipping Information

UN No.: 1078



Shipping Containers  
Cylinders  
Ton Tanks  
Tank Trucks

## 15. REGULATORY INFORMATION

### EC Classification

- Symbol
- Labelling of cylinders Labelling “Dangerous for environment” not classified in the absence of classification criteria to be applied to dangerous preparations.
- Symbol
- Risk phases
- EEC Hazard Class

## 16. OTHER INFORMATION

The information given corresponds to the current state of our knowledge and experience of the product, and is not exhaustive. This applies to product that conforms to the specification, unless otherwise stated. In the case of combinations and mixtures one must make sure that no new dangers can arise. In any case, the user is not exempt from observing all legal, administrative and regulatory procedures relating to the product, personal hygiene, and protection of human welfare and environment.

Responsibility for MSDS: MSDS Coordinator  
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Indicates updated section.

End of MSDS