

Safety Data Sheet

According to Regulation (EC) No 1907/2006

R22, Chlorodifluoromethane

Version 2.0

Printing date: 04/11/2016

Revision date: 25/08/2023

SDS Record Number: CSSS-TCO-010-114877

Section 1 Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier:

Identification on the label/Trade name: R22, Chlorodifluoromethane
Additional identification: Monochlorodifluoromethane
Identification of the product: See section 2
Index Number: Not available
REACH registration No.: Not available

1.2 Relevant identified uses of the substance and uses advised against:

1.2.1 Identified uses:

Refrigerant, foam agent/ Refrigerant, foam agent.

1.2.2 Uses advised against:

Not available.

1.3 Details of the supplier of the safety data sheet:

Supplier(Only representative): Chemical Inspection & Regulation Service Limited
Supplier(Manufacturer): JINHUA SLIHE CHEMICAL CO., LTD.
Address: NO.2777 BINHONG WEST ROAD,JINHUA, ZHEJIANG, CHINA
Contact person(E-mail): info@slihe.net
Telephone: 86-579-82881765
Fax: 86-579-82881765

1.4 Emergency telephone Number:

+86 579 82881765 Only available during office hours (8:30a.m.-17:30p.m)

Available outside office hours?

YES

☐

NO

☒ X

Section 2 Component/ingredient Information

2.1 Classification of the substance/mixture:

2.1.1 Classification:

The mixture is classified as following according to 1999/45/EC and REGULATION (EC) No 1272/2008:

REGULATION (EC) No 1272/2008	
Hazard classes/Hazard categorie	Hazard statement
Liquefied gas	H280

For full text of H- phrases: see section 2.2.

1999/45/EC	
Hazards characteristics	R-Phrases
-	-

2.2 label elements:

Transport Label:



Signal Word(S):

Warning

Hazard Statement:

H280: Contains gas under pressure; may explode if heated.

Precautionary statement:

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

2.3 Other hazards:

Not applicable.

Section 3 Component/ingredient Information

Pure or mixture:purity

Name of chemical: monochlorodifluoromethane

Hazardous element	content	CAS No:
Chlorodifluoromethane	99.9%	75-45-6

Section 4 Description of hazard

4.1 Risk categories: 2.2 category of inflammable gas

4.2 Route of entry: inhalation, ingestion.

4.3 Health hazards:

This product is of low toxicity. It has anaesthesia effect, if exposed to high concentration will cause hypoxia-induced asphyxia, heart, liver damage. During the procedure of preparing tetrafluoroethylene, the released decomposed gas is poisonous, can cause poisoning. If skin or eye contacts with liquid products, can cause frostbite damage.

4.4 Environmental hazards:

The product has highly destructive force to destroy ozone layer.

4.5 Flammable and explosive hazards:

The product is not flammable, if contact with high temperature, the pressure within container will increase with the possibility of rupture and explosion

Section 5 Emergency Measure

5.1 Skin contact:

strip contaminated clothing, use soap and clean water to wash skin thoroughly, at least 15 minutes.
For frostbite, seek medical treatment.

5.2 Eye contact:

Lift up eyelids, wash with use running or saline water. Seek medical treatment.

5.3 Respiration:

Evacuate rapidly from the operation area to fresh air. Keep the respiration airway open. If breathing is difficult, execute oxygen therapy. If breathing stop, execute artificial respiration, after that, seek medical treatment.

5.4 Ingestion:

drink enough warm water to force vomit, seek medical treatment

Section 6 Fire fighting measure

6.1 Hazard property:

If in high temperature, the pressure in the container will increase with possibility of rupture or explosion

6.2 Hazardous product of combustion:

Carbon monoxide, carbon dioxide, hydrogen fluoride.

6.3 Extinguishing method:

This product itself is not flammable. Cut off gas resource. Spill water to cool off container, remove container to open place if possible.

6.4 Recommended extinguishing agent: Foggy water, foam, carbon dioxide

6.5 Attention and measure:

Wear protective clothes and self-contained positive pressure ventilator, extinguish fire at upwind place.

Section 7 Anti-leak Emergency Management

7.1 Emergency treatment method:

Evacuate person from contaminated area to fresh air, quarantine, strict on access. It is suggested that emergency personnel wear positive self-contained breathing apparatus and protective clothes. Cut off the source of leakage, remove the leaked container to ventilated area. The leaked container should be carefully handled and repaired, reuse after testing.

7.2 Elimination:

Properly ventilated, accelerate proliferation. Execute at earliest opportunity.

Section 8 Handling and storage

8.1 Handling:

Operate in enclose area with sufficient ventilation. Operators should be specially trained, and rigorously observe the regulation of operation procedure. If the concentration exceeds the standard, operator should wear self-contained breathing apparatus protective goggle to prevent gas leak to the air. When pack or unpack this product, pay attention not to damage cylinder and accessories which should be outfitted with anti-leak emergency management equipment.

8.2 Store:

This product should be kept in cool and ventilated place. Keep away from fire or heat resource. The temperature in the storage should not surpass 30℃, avoid direct sunshine, store separately from oxide, flammable substance and food chemical, pay special attention not to mix them up. Storage area should be outfitted with anti-leak emergency treatment equipment. When check and accept the product, pay attention to the name of the chemical and the date of testing. Consign the product in the principle of "first in, first out".

Section 9 Contract Control /Personnel Protection

Maximum density:

China MAC (mg/m3): no information

China PC-TWA (mg/m3): 3500

China PC-STEL (mg/m3): 5250

Soviet Union MAC (mg/m3): 3000

Unite States TLV-TWA: ACGH 1000 ppm, 3450mg/m3

Unite States TLV-STEL: no information

Monitoring method: gas chromatography

Engineering control: fully ventilated

Respiration protection: If concentration in the air surpasses the regulatory requirement, wear self-contained breathing apparatus (half mask).

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Eye protection: Wear anti-chemical protective glass if necessary.

Body protection: Wear normal protective working clothes.

Hand protection: Wear normal protective goggle.

Other protection: Not inhale high concentration of this product. Before enter into column or limited space or other high concentration area for operation, designate personnel to monitor.

Section 10 Physical and Chemical property

Appearance and properties: colourless and transparent liquid with a slight scent of ether.

PH value: No information.

Melting point(°C): -146

Boiling point(°C) : -40.8

Relative density (water=1): 1.18

Relative vapour density (air=1):3.0

Saturated vapour pressure (kPa): 13.33(-76.4°C)

Critical temperature (°C): 96

Critical pressure (MPa): 4.91

Octanol/water logarithm value: 1.08

Flash point (°C): Not applicable

Ignitron temperature: Not applicable

Upper explosive limit [% (V/V)]: Not applicable

Lower explosive limit [% (V/V)]: Not applicable

Dissolubility: Dissolvable in water.

Main application: Used in refrigerant, aerosol pesticide.

Section 11 Stability and Reactivity

Stability: Stable

Condition that should be avoided: high temperature

Forbidden mixture: Strong oxidizer, flammable substance

Aggregation hazard: Not exist

Decomposed product: Carbon monoxide, carbon dioxide, hydrogen fluoride.

Section 12 Toxicology Information

Acute toxicity: LD50: 1,000,000 mg/m3, 2 hours (inhaled by rats)

LC50: 2400 mg/m3, 2 hours (inhaled by rat)

Subacute and chronic toxicity: Rats and mice inhaled concentration of 0.2%, 6 hours / day, a total of 10 months, No toxicity effect rabbits: 1.4% concentration, weight loss, lowering serum protein, globulin increased. Pulmonary alveolar anatomy see interstitial thickening, pulmonary edema, heart, liver, kidney and nervous system degeneration.

Irritation: Not available.

Mutagenicity: microbial mutagenicity: Salmonella 33ppm/24 hours (continuous). Particle-induced: Salmonella 33ppm/24 hours (continuous).

Other: reproductive toxicity: rat inhale poison minimum concentration (TCL0) : 50000ppm/5 hours (male 56 days), affects prostate, seminal vesicle, Cowper's glands, glands subsidiary, urethral.

Section 13 Ecology Information

Biologic toxicity: No information

Biologic degrade: No information

Non-biologic degrade: No information

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Section 14 Waste Disposal

Waste property: No information

Waste disposal method: According to national and local laws and regulations relating to the disposal requirements. Or contact manufacturers for recycling.

Attention: Dispose of according to relevant national regulation.

Section 15 Transportation information

Hazard matter number: 22039

UN number: 1018

Packing marker: Non-flammable gas

Packing category: III class package

Packing method: steel cylinder.

Attention: Fix valve protection caps during the transportation, put steel cylinder flat, the mouth of cylinders toward the same direction, not across; The height should not surpass the protective balustrade of transporting car and firmly secured with triangle wood headlock to prevent rolling. It is forbidden to mix up with food chemical during transportation. In summer, transport at morning or evening, avoid sunshine. Drives by relevant regulation, not park the transportation vehicle at downtown or dense-population area.

Section 16 Regulation Information

"Hazardous chemical safety management regulation", The No.334 order of china's state department, effective date: 15th, March, 2002

"The regulation of chemical using in working place" It regulate the using, production, storage, transportation and pack and unpack of hazardous chemical.

In the standard of Label and Marking of Common Hazardous Chemical(GB13690-92), this product is classified as 2.2 category non-flammable gas.

This CSDS is written according to "Regulation of writing chemical safety data sheet"(GB 16843-2000).

Section 17 Other Information

Reference:

"Complete chemical hazard safety data sheet", published by chemical industry publish house, 1997

"Occupational medicine in China" published by people's sanitation publish house, 1999

"Manual of common chemical hazard safety", published by China petroleum publishing house, 1998

"Environmental statistic manual of chemical toxicity regulation", published by China environmental science publishing house, 1992

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