



Material Safety Data Sheet

Material Name: Trifluoromethane (R23)

MSDS ID: Hynote-0018

Section 1 - Product and Company Identification

Synonyms: Trifluoromethane (R23)

Chemical Name: Trifluoromethane

Chemical Family:

Material Use:

Chemical Formula: CHF₃

ShangHai Hynote

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EMERGENCY Telephone Numbers:

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+86-379-65867058 (In North China)
+86-10-110/119/120 (24 Hours)

Product Information: +86-379-65867058

MSDS Information Email: hynote@shtel.net.cn

Section 2 - Composition/information on ingredients

Substance / Preparation : Substance

Substance name	Contents	CAS No	EC No	Index No	Classification
Trifluoromethane (R23) :	100 %	75-46-7	200-872-4	-----	

Contains no other components or impurities which will influence the classification of the product.

Section 3 - Hazards Identification

Hazards identification: Liquefied gas.

In high concentrations may cause asphyxiation.

Section 4- First Aid Measures

First aid measures

Inhalation: In high concentrations may cause asphyxiation. Symptoms may include loss of mobility/consciousness. Victim may not be aware of asphyxiation. In low concentrations may cause narcotic effects. Symptoms may include dizziness, headache, nausea and loss of co-ordination. Remove victim to uncontaminated area wearing self contained breathing apparatus. Keep victim warm and rested. Call a doctor. Apply artificial respiration if breathing stopped.



Skin/eye contact: Immediately flush eyes thoroughly with water for at least 15 minutes. In case of frostbite spray with water for at least 15 minutes. Apply a sterile dressing. Obtain medical assistance.

Ingestion: Ingestion is not considered a potential route of exposure.

Section 5- Fire-Fighting Measures

Flammable class : Non flammable.

Specific hazards : Exposure to fire may cause containers to rupture/explode.

Hazardous combustion products : If involved in a fire the following toxic and/or corrosive fumes may be produced by thermal decomposition : Carbonyl fluoride.

Carbon monoxide.

Hydrogen fluoride.

Extinguishing media

Suitable extinguishing media: All known extinguishants can be used.

Specific methods: If possible, stop flow of product. Move away from the container and cool with water from a protected position.

Special protective equipment for fire fighters: Use self-contained breathing apparatus and chemically protective clothing.

Section 6- Accidental Release Measures

Personal precautions: Evacuate area.

Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe.

Ensure adequate air ventilation.

Environmental precautions: Try to stop release.

Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous.

Clean up methods: Ventilate area.

Section 7- Handling and Storage

Storage: Keep container below 50°C in a well ventilated place.

Handling: Suck back of water into the container must be prevented.

Do not allow backfeed into the container.

Use only properly specified equipment which is suitable for this product, its supply pressure and temperature. Contact your gas supplier if in doubt.

Refer to supplier's container handling instructions.

Section 8- Exposure Controls/Personal Protection

Personal protection: Ensure adequate ventilation.

Do not smoke while handling product.



Section 9- Physical and Chemical Properties

Physical state at 20 °C: Liquefied gas.

Colour: Colourless gas.

Odo(u)r: Ethereal.

Poor warning properties at low concentrations.

Molecular weight: 70

Melting point [°C]: -155

Boiling point [°C]: -82.2

Critical temperature [°C]: 25.6

Vapour pressure, 20°C: 41.6

Relative density, gas (air=1): 2.4

Relative density, liquid (water=1): 1.4

Solubility in water [mg/l]: 1080

Other data: Gas/vapour heavier than air. May accumulate in confined spaces, particularly at or below ground level.

Section 10- Stability and Reactivity

Stability and reactivity: Stable under normal conditions.

Thermal decomposition yields toxic products which can be corrosive in the presence of moisture.

Section 11- Toxicological Information

Toxicity information: No known toxicological effects from this product.

Section 12- Ecological Information

Ecological effects information: No known ecological damage caused by this product.

Not covered by the 'Montreal Protocol'.

Global warming factor [CO₂=1]: 11700

Section 13- Disposal Considerations

General: Do not discharge into any place where its accumulation could be dangerous.

Contact supplier if guidance is required.

Section 14- Transport Information

UN No.: 1984

H.I. nr: 20



ADR/RID

- **Proper shipping name:** TRIFLUOROMETHANE (REFRIGERANT GAS R23)

- **ADR Class:** 2

- **ADR/RID Classification code:** 2 A

- **Labelling ADR:** Label 2.2 : Non flammable, non toxic gas.

Other transport information: Avoid transport on vehicles where the load space is not separated from the driver's compartment.

Ensure vehicle driver is aware of the potential hazards of the load and knows what to do in the event of an accident or an emergency.

Before transporting product containers :

- Ensure that containers are firmly secured.
- Ensure cylinder valve is closed and not leaking.
- Ensure valve outlet cap nut or plug (where provided) is correctly fitted.
- Ensure valve protection device (where provided) is correctly fitted.
- Ensure there is adequate ventilation.
- Compliance with applicable regulations.

Section 15- Regulatory Information

EC Classification: Not included in Annex I.

Not classified as dangerous preparation/substance.

EC Labelling: No EC labelling required.

- **Symbol(s):** None.

- **R Phrase(s):** None.

- **S Phrase(s):** None.

Section 16- Other Information

Asphyxiant in high concentrations.

Keep container in well ventilated place.

Do not breathe the gas.

Ensure all national/local regulations are observed.

Contact with liquid may cause cold burns/frostbite.

The hazard of asphyxiation is often overlooked and must be stressed during operator training.

This Safety Data Sheet has been established in accordance with the applicable European Directives and applies to all countries that have translated the Directives in their national laws.

Before using this product in any new process or experiment, a thorough material compatibility and safety study should be carried out.

Details given in this document are believed to be correct at the time of going to press. Whilst proper care has been taken in the preparation of this document, no liability for injury or damage resulting from its use can be accepted.



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