

# TRIFLUOROMETHANE (CHF<sub>3</sub>)

Synonyms : Fluoroform; Carbon trifluoride; Fluoryl; Freon 23;  
Methyl trifluoride; Halocarbon 23; R 23



## Gas Description

Trifluoromethane is a colourless, odourless, non-toxic, non-corrosive and non-flammable gas with a gas density at STP 2.99 kg/m<sup>3</sup>. Trifluoromethane is an irritant and is narcotic in high concentration. Trifluoromethane is a controlled substance in Australia and as such requires a specific licence for purchase and use.

### Typical applications :

Low temperature refrigerant  
Intermediate in organic synthesis  
Plasma etching

### Transport Regulations :

UN Number : 1984  
Shipping Name : TRIFLUOROMETHANE  
Class : 2.2: Non-Flammable / Non-Toxic  
CAS Number : 75-46-7  
Hazchem : 2RE

[Click here](#) for MSDS  
[Click here](#) for more information

## Physical Properties

Chemical symbol : CHF<sub>3</sub>  
Molecular weight : 70.01  
Specific gravity (Air=1) : 2.43  
Specific volume (m<sup>3</sup>/kg) : 0.343  
Critical temperature : 25.6°C  
Boiling point : -82.1°C

Melting Point : -155.2°C  
Critical pressure (bar) : 48.37  
Major hazards : High Pressure, Suffocation  
Toxicity : None Established  
Flammability Range : Non-Flammable  
Odour : Slightly Ethereal

[Click here](#) for more information

## Application

### INDUSTRY

Electronics

Other

### APPLICATION

Trifluoromethane is used in plasma etching of silicon oxide or nitride layers.

Trifluoromethane is a low temperature refrigerant. It is replacing chlorodifluoromethane (R22 or CHF<sub>2</sub>Cl)

[Click here](#) for more information

## Trifluoromethane

### Gas

Typical impurities  
(ppm molar)

### Cylinder information

Cylinder Size

Valve Connection

Pressure (kPa)

Contents (m<sup>3</sup>)

Available Upon Request  
Call For Supply Information

### Recommended Equipment

For further information [Contact](#) the specialty gases representative in your region.