

HALOCARBON 23 - (CHF₃)

4.5

DESCRIPTION : (Trifluoromethane) A colorless, non flammable, liquefied, high-pressure gas shipped at its vapor pressure of 43,7 Barg at 21° C.	APPLICATIONS : CHF ₃ is used in plasma etching, especially of SiO ₂ and Si ₃ N ₄ where good selectivity versus underlying polysilicon can be achieved. With added O ₂ , polymer formation can be controlled; additional H ₂ -containing gases improve the SiO ₂ -to-Si selectivity. Mixtures of both CHF ₃ and C ₂ F ₆ are often used for SiO ₂ etching. Ask your local Praxair semiconductor gases applications specialist for additional information.	ADR Item No. : 2, 2 A
		ADR Label 2.2 Non flammable, non toxic gas
		MSDS REFERENCE : 119
		CHEMICAL ABSTRACTS : 75-73-0
		UN No. : 1984

PRODUCT		PRESSURE BARG	VALVE TYPE	VALVE OUTLET DIN 477 No	VALVE MATERIALS OF CONSTRUCTION
CYLINDER	CONTENTS				
10H	7,5 kg	43,7	Diaphragm	6	316L SS
50H	30 kg	43,7	Diaphragm	6	316L SS

PRODUCT CHARACTERISTICS	PRAXAIR SPECIFICATIONS	METHOD OF ANALYSIS (SEE KEY)
MINIMUM PURITY	99.995 %	
Acidity (HF)	≤ 1 ppm	N
Air (O ₂ + N ₂)	≤ 50 ppm	A
Carbon Dioxide (CO ₂)	≤ 10 ppm	J
Other Halocarbons	≤ 10 ppm	H
Methane (CH ₄)	≤ 1 ppm	A
Water (H ₂ O)	≤ 4 ppm	E

Notes :

- Other halocarbons defined as halocarbon 22.

- ◆ Cylinder sizes, contents, valve types and valve connections other than those indicated above are available on request.
- ◆ All expressions for concentration are for gas phase, by volume unless otherwise noted.
- ◆ MSDS Ref.: More detailed Safety Information can be obtained from the Material Safety Data Sheet No. 119

Key to Analytical Techniques	
A Gas Chromatograph with Thermal Conductivity Detector	D Specific Oxygen Analyzer
B Gas Chromatograph with Flame Ionization Detector	E Specific Water Analyzer
C Gas Chromatograph with Ultrasonic Detector	F Total Hydrocarbon Analyzer
	G Infrared
	H Proprietary
	I Gas Chromatograph with Helium Ionization Detector
	J Flame Ionization with Methanizer
	K Gas Chromatograph - Photo Ionization
	L Gas Chromatograph - Flame Photometric
	M Mass Spectrometry
	N Wet Chemical
	O Gas Chromatograph with Discharge Ionization Detector
	P Gas Chromatograph with Methanizer Carbonizer
	Q Gas Chromatograph with Electrolytic Conductivity
	R Gas Chromatograph with Reduction Gas Analyzer
	S Gaschromatograph with High Frequency Discharge Detector

IMPORTANT

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