

# HALOCARBON 23 - (CHF<sub>3</sub>)

2.0

<b>DESCRIPTION :</b> (Trifluoromethane) A colorless, non flammable, liquefied, high-pressure gas shipped at its vapor pressure of 43,7 Barg at 21° C.	<b>APPLICATIONS :</b> CHF <sub>3</sub> is used in plasma etching, especially of SiO <sub>2</sub> and Si <sub>3</sub> N <sub>4</sub> where good selectivity versus underlying polysilicon can be achieved. With added O <sub>2</sub> , polymer formation can be controlled; additional H <sub>2</sub> -containing gases improve the SiO <sub>2</sub> -to-Si selectivity. Mixtures of both CHF <sub>3</sub> and C <sub>2</sub> F <sub>6</sub> are often used for SiO <sub>2</sub> etching. Ask your local Praxair semiconductor gases applications specialist for additional information.	<b>ADR Item No.</b> : 2, 2 A <b>ADR</b> Label 2.2 Non flammable, non toxic gas  <b>MSDS REFERENCE</b> : 119 <b>CHEMICAL ABSTRACTS</b> : 75-73-0 <b>UN No.</b> : 1984
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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	40 kg	43,7	Diaphragm	6	316L SS

PRODUCT CHARACTERISTICS	PRAXAIR SPECIFICATIONS	METHOD OF ANALYSIS (SEE KEY)
<b>MINIMUM PURITY</b>	<b>99 %(*)</b>	
Air (O <sub>2</sub> + N <sub>2</sub> )	≤ 1000 ppm	A
Other Halocarbons	≤ 8000 ppm (*)	H
Water (H <sub>2</sub> O)	≤ 10 ppm/w (*)	E

(\*) Liquid Phase

**Notes :**

1. Other halocarbons defined as halocarbons 13 and 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	K	Gas Chromatograph - Photo Ionization
B	Gas Chromatograph with Flame Ionization Detector	E	Specific Water Analyzer	L	Gas Chromatograph - Flame Photometric
C	Gas Chromatograph with Ultrasonic Detector	F	Total Hydrocarbon Analyzer	M	Mass Spectrometry
		G	Infrared	N	Wet Chemical
		H	Proprietary	O	Gas Chromatograph with Discharge Ionization Detector
		I	Gas Chromatograph with Helium Ionization Detector	P	Gas Chromatograph with Methanizer Carbonizer
		J	Flame Ionization with Methanizer	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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