→ Datasheet

Anhydrous hydrogen fluoride. aHF

Product information

aHF etches sacrificial SiO_2 with very high selectivity in MEMS release etch of Si, poly-Si, and Al structural materials. aHF offers high silicon dioxide etch selectivity over Si without stiction issues seen from wet etch process.

Characteristics

Highly corrosive. Liquefied gas with pungent odor. Forms white fumes in humid air. Highly corrosive under humid conditions. Gas density is heavier than air.

Physical data

Molecular weight	[g/mol]	20.006		
Boiling point	at 1.013 bar [°C]	19.52	at 14.5 psi [°F]	67.16
Density	at 1.013 bar, 15 °C [kg/m³]	0.92	at 1 atm., 70 °F [lb/ft³]	0.053
Vapor pressure	at 0 °C [bar]	0.48	at 32 °F [psi]	6.97
	at 20 °C [bar]	1.04	at 70 °F [psi]	15.48
Flammability range in air (% volume)		Non-combustible		

Product specification

Purity grade	Typical purity	Typical impurities [ppm]				
		Cl	H_2O	NO_3	HPO_4^{2-}	SO_4^{2-}
4.5N	≥99.995 %	≤1	≤3	≤1	≤1	≤1
3.6N	≥99.96 %	≤5	>5	≤5	≤1	≤5

Contact our team for higher grade or different specification products.

Shipping information

UN number	CAS number	EC number	DOT label	Hazard labels required
1052	7664-39-3	231-634-8	Corrosive Poison gas Inhalation hazard	ADR Class 8 CT1 DOT Class 8

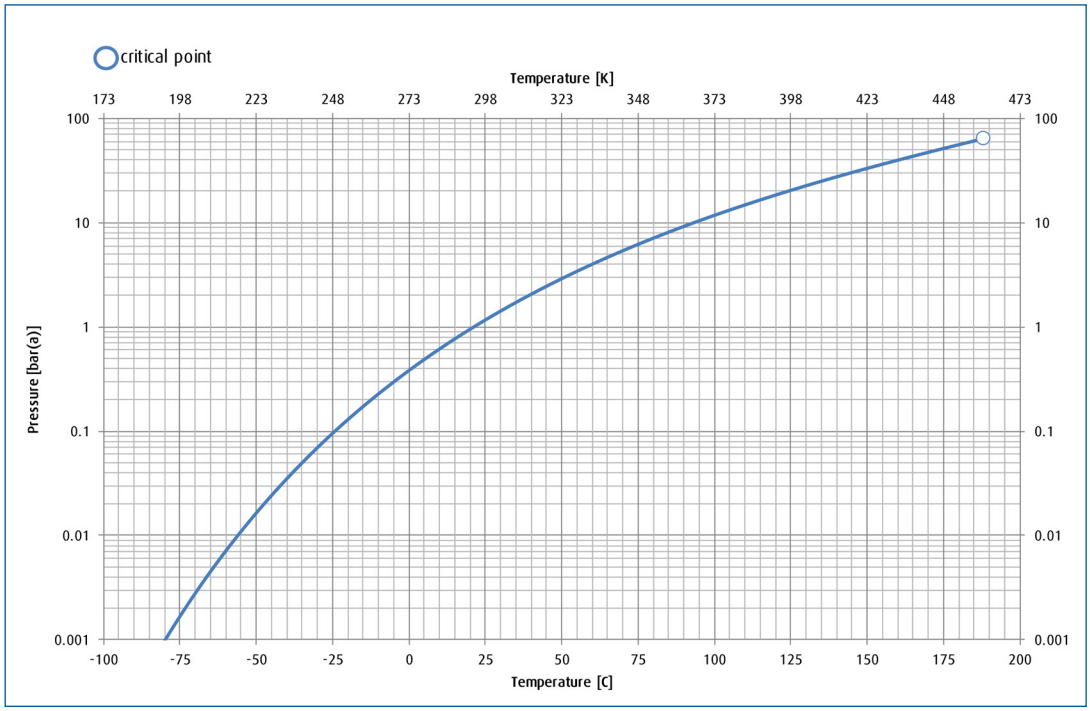
Packaging information

US

Package options	Cylinder designation	Cylinder internal volume	Cylinder material	Cylinder diameter	Cylinder height to valve outlet	Cylinder tare weight	Fill contents	Pressure (psig) @ 70°	Valve outlet	Valve material
Cylinder	45	18.2 L	Nickel (3)	6.63 in	44.5 in	90 lb	33 lb	0.8	1/4" VCR / CGA 638	SS
Cylinder	43	4.5 L	Nickel (3)	4.00 in	25.5 in	3.8 lb	8.4 lb	0.8	1/4" VCR / CGA 638	SS
Cylinder	42	2.8 L	Nickel (3)	4.00 in	18 in	2.2 lb	4.8 lb	0.8	1/4" VCR / CGA 638	SS
Cylinder	209	44 L	Nickel plated	9.00 in	53 in	130 lb	75 lb	0.8	1/4" VCR / CGA 638	SS
Cylinder	89	16 L	Nickel plated	7.00 in	32 in	70 lb	27.5 lb	0.8	1/4" VCR / CGA 638	SS
Cylinder	39	8 L	Nickel plated	12.50 in	20 in	40 lb	12.5 lb	0.8	1/4" VCR / CGA 638	SS

Note (3) Contact Product Management to determine Nickel cylinder availablity

Vapor pressure curve



Additional information

The information, recommendations, and data contained in this publication are intended to give basic guidance for safe handling and use of gases. For more information, please refer to Safety Data Sheets. You can locate these through the Linde Safety Data Sheet Search. It is essential for the safe use of gases that personnel are properly trained and are fully aware of the possible hazards. Further information and advice on any matter relating to the safe handling or use of these products may be obtained from the nearest Linde office.

Please visit www.linde.com/electronics for Linde Electronics sales offices information.