



# Hydrogen chloride. (HCl)

**Product information** Hydrogen chloride mediates the growth of epitaxial films of silicon, germanium, and III-V materials; it is also used to remove surface oxides and to etch metallic thin films.

**Characteristics** Colorless, liquefied gas with pungent odor.

Physical data	Molecular weight	[g/mol]	36.461	
	Boiling point	at 1.013 bar [°C]	-85.1	at 14.5 psi [°F]
Density	at 1.013 bar, 15 °C [kg/m <sup>3</sup> ]	1.552	at 1 atm., 70 °F [lb/ft <sup>3</sup> ]	0.095
Vapor pressure	at 0 °C [bar]	25.6	at 32 °F [psi]	371.1
	at 20 °C [bar]	42.02	at 70 °F [psi]	625.37
Flammability range in air (% volume)	Non combustible			

Product specification	Purity grade	Typical purity	Typical impurities [ppm]					
			H <sub>2</sub> O	O <sub>2</sub>	N <sub>2</sub>	CO	CO <sub>2</sub>	THC(CH <sub>4</sub> )
5N	≥99.999 %	1	1	2	1	4	1	20
4.7N	≥99.997 %	2	4	10	1	5	2	-

Shipping information	UN number	CAS number	EC number	DOT label	Hazard labels required
	1050	7647-01-0	231-595-7	Poison Gas, Corrosive	ADR Class 2, 2TC DOT Class 2.3

Packaging information	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 <sup>(2)</sup>	Valve material
	Tube Trailer	Tube Trailer	16590L	Steel	24 in	60 in	43000 lb	21000 lb	613	CGA 330	SS
	Ton Container	920	446L	Steel	24 in	16.1 in	1100 lb	600 lb	613	CGA 330/ DISS 634	SS
	Cylinder	204	44L	Steel	9.8 in	54 in	98 lb	60 lb	613	CGA 330/ DISS 634	SS
	Cylinder	34	8L	Steel	6.5 in	17 in	15 lb	8 lb	613	CGA 330/ DISS 634	SS

Valve and package option combinations depends on Grade.

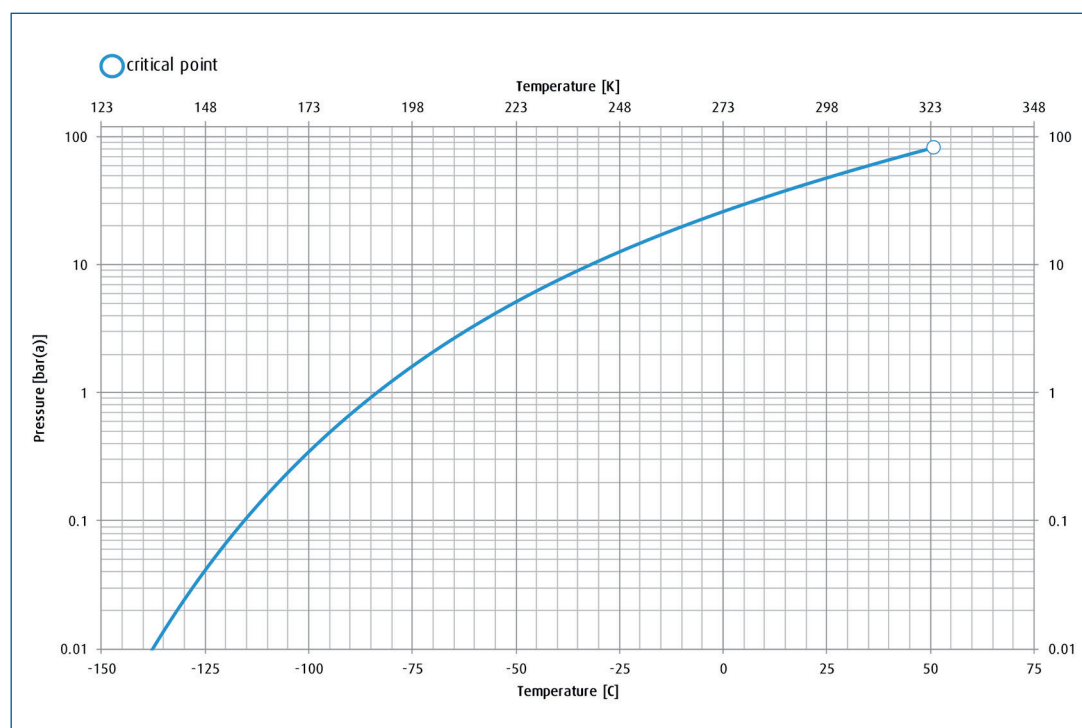
→ [Hydrogen chloride. Product datasheet.](#)

## Packaging information

	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 <sup>(2)</sup>	Valve material
EU	Drum	800L	800L	Steel	1000 mm	1780 mm	1960 kg	590 kg	615	CGA 634	SS
	Cylinder	52L	52L	Stainless Steel	230 mm	1600 mm	50 kg	34 kg	615	DIN 8	SS
	Cylinder	50L	50L	Steel	237 mm	1500 mm	70 kg	36 kg	615	DIN 8/ CGA 634	SS
	Cylinder	10L	10L	Steel	200 mm	110 mm	24 kg	6 kg	615	DIN 8	SS
	Cylinder	2L	2L	Steel	165 mm	4300 mm	7 kg	1 kg	615	DIN 8	SS
China	Cylinder	44L	44L	Steel	230 mm	1400 mm	65 kg	25 kg	615	CGA 330/ CGA 634	SS

Please inquire about other package size availability

## 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.

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