



High-Purity Chlorine

Chlorine



Properties and Classification

Appearance: Yellow gas

Odor: Irritating

CAS Number: 7782-50-5

UN Number: 1017

Liquefied gas

Toxic



* Refer to MSDS for detailed information on the properties and safety of the product.

Specification

Purity	vol%	Min. 99.999
H ₂	volppm	Max. 0.1
O ₂	volppm	Max. 1.0
N ₂	volppm	Max. 4.0
CH ₄	volppm	Max. 0.1
CO	volppm	Max. 1.0
CO ₂	volppm	Max. 2.0
H ₂ O	volppm	Max. 2.0

Heavy metals		
Na	wtppb	Max. 10
Zn	wtppb	Max. 10
Fe	wtppb	Max. 100
Cu	wtppb	Max. 10
Ni	wtppb	Max. 10
Cd	wtppb	Max. 5
Cr	wtppb	Max. 1
P	wtppb	Max. 5

Cylinder

Item		10L cylinder	47L cylinder
Size	Inside diameter	140mm	232mm
	Height (to the neck portion)	850mm	1370mm
	Height (with a protective cap) *	1000mm	1520mm
	Valve nozzle height (center) *	885mm	1400mm
Loading weight		10kg	50kg
Material		Manganese steel (Clean-S-treated)	

* Estimated values for when a standard valve is mounted on a standard cylinder. The accuracy of these values is not guaranteed.

Valve

Nozzle size	26 mm X 14 right-hand threads
Material	SUS316 (Clean-S-treated)

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Physical & Chemical Properties

Item	Unit	Data
Chemical formula		Cl ₂
Molecular weight		70.91
Boiling point		- 34.05
Melting point		- 101
Liquid density (0° C, saturated liquid)	kg/L	—
Sublimation point		- 34.1
	<	- 29.3
Specific gravity (-34° C)		1.558
Gas density	g/L	3.214
Critical temperature		144
Critical pressure	MPa	7.7
	kg/ cm ²	78.6
Flammability		Not applicable
Toxicity		Toxic
Latent heat of vaporization (0° C, 1013 kPa)	kJ/kg	287.8
Maximum permissible concentration (ACGIH, TLV-TWA)	ppm	0.5 (8 hours)
Explosive limit (in air, 35° C, 101.3 kPa)		—

Temperature - Vapor Pressure Curve

