Chlorine

Cl_2

Grade	Semicon 4N	ULSI 5N	ULSI PLUS 5N				
Purity, %	99.99	99.999	99.999	Metals, ppbw			
Oxygen	≤50 ppmv	≤1.0 ppmv	≤1.0 ppmv	Ca	≤10	Ni	≤300
Nitrogen	≤50 ppmv	≤2.0 ppmv	≤2.0 ppmv	Cd	≤10	K	≤100
Carbon Dioxide	≤30 ppmv	≤4.0 ppmv	≤4.0 ppmv	Cr	≤100	Na	≤50
Carbon Monoxide	≤5 ppmv	≤0.5 ppmv	≤0.5 ppmv	Cu	≤100	Zn	≤20
Methane	≤1 ppmv	≤0.1 ppmv	≤0.1 ppmv	Fe	≤200		
Water			≤2.0 ppmv	Total Metals:		≤1,000	

- A lot analysis is provided for each order. – Individual analysis is also available upon request.
- Pneumatic valves, JIS connections available upon request.

CYLINDER

Internal Volume	Liters	439	43.8		
Cylinder Sizes >>		**QI**	**QF/QB**		
Content	kg	499.4	50	45.4	31.8
	lbs	1,100	110	100	70
Change Point*	lbs	20.4	2.04		

*Recommended Cylinder Change Point at NTP, based on Phase Break, or the amount of product left in the cylinder when the liquid phase has completely evaporated and only gaseous product is left (estimate based on ideal gas behavior).

SHIP

DOT Shipping Name	Chlorine	UN Number	UN 1017	Shipped as
DOT Classification	2.3 Poison Gas, Hazard Zone B (Gas Poisonous by Inhalation)	ECCN #	EAR99	Liquefied Gas
DOT Label	INHALATION HAZARD, CORROSIVE GAS	Harmonized #	2801.10.0000	

TECHNICAL DATA

Cylinder Pressure @NTP	85.3 psig
	7.0 atm
Specific Volume @NTP	0.34 m^3/kg
	5.4 ft^3/lb
CAS No	7782-50-5
CGA/DISS/JIS	660/728/W26-14R
Molecular Weight	70.91 g/mol
TLV	0.5 ppm

Vapor Pressure	Temp, °C	0.0	15.5	21.0	32.2	43.3
	Press, psig	38.9	72.1	85.3	122.4	166.0
	Temp, °F	32	60	70	90	110

RFO Data	Size, mm	0.254	0.3556	0.508	0.762	1.016
	Size, inches	0.010	0.014	0.020	0.030	0.040
	Flow, sccm	2519	4810	9925	22141	38174
	Flow, scf/h	5.3	10.2	21.0	46.9	80.9

NTP = 21°C or 70°F and 101.3 kPa or 1 atm

Cylinder	Treatment	Nominal Diameter (OD)xHeight*		Material of Construction	
		cm	Inches	Cylinder	Valve
QI	ULTRA-LINE®	61x211	24x83	CS	SS
QF	ULTRA-LINE®	23x130/134/143	9x51/52.5/56	CS	SS
QB	ULTRA-LINE II®	23x130/134/143	9x51/52.5/56	CS	SS

*Height is reported as the distance from the bottom of the cylinder to the cylinder neck/ center of the valve outlet/ top of the handwheel
CS: Carbon Steel SS: Stainless Steel

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