

ELECTRONIC GASES

CHLORINE TRIFLUORIDE ClF_3

Chlorine trifluoride is a corrosive, colourless gas with a sweet odor and is highly irritating even at low concentrations. It is a powerful oxidising agent causing ignition of many organic compounds and ignites many metals at elevated temperatures. It reacts violently with water. It is shipped as a liquefied gas under its own vapour pressure.

Container Information

CYLINDER SIZE	CONTENTS		Pressure@21.1°C Valve Outlet	7 psig std: CGA-670 / CGA-728
	LB	KG		
044	44	20	DOT Shipping Description:	Chlorine Trifluoride 2.3 UN 1045
			DOT Shipping Labels	Poison Gas Oxidiser and Corrosive
016	15.4	7	DOT Guide No. CAS Registry No.	20 7664-41-7

Specifications

COMPONENT	SEMICONDUCTOR
CHLORINE TRIFLUORIDE	99.9%min
Nitrogen	50 ppm
Oxygen	20 ppm
Hydrogen Fluoride	700 ppm
SHELF LIFE: 2 years	

Physical Properties

Molecular Weight	92.448
Flammability Limits in air	Nonflammable
Specific Gravity, Gas @ 70°F(21.1°C), 1 atm(Air=1)	3.2
Density, Gas @ 70°F(21.1°C), 1 atm	0.23lbs/ft³ (0.0615kg/m³)
Specific Volume, Gas @ 70°F(21.1°C), 1 atm	4.2 ft³/lb (16.26m³/kg)
Boiling Point @ 1 atm	53.2°F (11.75°C)
Critical Temperature	345.2°F (175.0°C)
Critical Pressure	837.7 psia (57.76 bar)
Toxicity	
PEL/TLV	0.1 pm
LC ₅₀	25 ppm