

ELECTRONIC GASES

BORON TRIFLUORIDE BF_3

Boron Trifluoride is a colorless, corrosive, nonflammable toxic high pressure gas with a pungent, suffocating odor. It forms dense fumes in humid air. It is irritating to the mucous membranes. It is soluble in water where it decomposes to form fluoroboric acids. It hydrolyses in moist air. Boron Trifluoride is shipped as a high pressure compressed gas.

Container Information

CYLINDER SIZE	CONTENTS		Pressure@21.1°C Valve Outlet DOT Shipping Description: DOT Shipping Labels DOT Guide No. CAS Registry No.	044: 1800 psig 016,008: 1000 psig 7X: 800 psig CGA-330 Boron Trifluoride, 2.3, UN 1008 Poison Inhalation Hazard Hazard Zone B Poison Gas 15 7637-07-2
	LB	KG		
044	60	27.2		
016	20	9.1		
008	10	4.5		
7X	200 grams			

Specifications

COMPONENT BORON TRIFLUORIDE	VLSI 99.995%min	ELECTRONIC 99.99%min
Carbon Monoxide	< 0.2 ppm	< 2 ppm
Carbon Dioxide	< 10 ppm	< 20 ppm
Nitrogen	< 10 ppm	< 15 ppm
Oxygen	< 5 ppm	< 5 ppm
Silicon Tetrafluoride	< 10 ppm	< 20 ppm
Sulfur Dioxide	< 20 ppm	< 20 ppm
Sulfates	< 8 ppm	< 8 ppm
THC (as Methane)	< 0.5 ppm	

SHELF LIFE: 2 years

Physical Properties

Molecular Weight	67.81
Flammability Limits in air	Nonflammable
Specific Gravity, Gas @ 70°F(21.1°C), 1 atm(Air=1)	2.37
Density, Gas @ 70°F(21.1°C), 1 atm	0.179lbs/ft³ (2.87g/l)
Specific Volume, Gas @ 70°F(21.1°C), 1 atm	5.5 ft³/lb (343.6ml/g)
Boiling Point @ 1 atm	-147.8°F (-99.8°C)
Melting Point @ 1 atm	-198.4°F (-128.0°C)
Critical Temperature	-10.0°F (-12.3°C)
Toxicity	
PEL / TLV	1 ppm
LC ₅₀	387 ppm
IDLH	100ppm