

SEMI C3.33-92 (Withdrawn 0312) STANDARD FOR BORON TRICHLORIDE (BCl₃) (PROVISIONAL)

This Standard was technically approved by the global Gases Technical Committee. This edition was approved for publication by the global Audits and Reviews Subcommittee on December 24, 2011. Available at www.semiviews.org and www.semi.org in March 2012; originally published in 1987; previously published March 2003.

NOTICE: This Document was balloted and approved for withdrawal in 2011; replaced by SEMI C71, Specification and Guide for Boron Trichloride (BCl₃).

1 Description

1.1 Boron trichloride is a colorless gas at room temperature and atmospheric pressure which fumes in the presence of moist air. It has a choking odor.

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2 Specifications

2.1 QUALITY: 99.9995% by wt. Liquid Phase

<i>Impurities</i>	<i>Maximum Acceptable Level (ppm)^{#1}</i>
Chlorine (Cl ₂)	10 Vapor Phase
Hydrogen Chloride (HCl)	1 Vapor Phase
Phosgene (COCl ₂)	1 Vapor Phase
Aluminum (Al)	0.5 by wt. Liquid Phase
Calcium (Ca)	0.5 by wt. Liquid Phase
Copper (Cu)	0.5 by wt. Liquid Phase
Iron (Fe)	0.5 by wt. Liquid Phase
Magnesium (Mg)	0.5 by wt. Liquid Phase
Nickel (Ni)	0.5 by wt. Liquid Phase
Potassium (K)	0.5 by wt. Liquid Phase
Silicon (Si)	1 by wt. Liquid Phase
Sodium (Na)	0.5 by wt. Liquid Phase
TOTAL IMPURITIES	5 by wt. Liquid Phase

#1 An analysis of significant figures has not been considered. The number of significant figures will be based on analytical accuracy and the precision of the provided procedure.

3 Physical Constants (for information only)

	<i>Metric Units</i>	<i>US Units</i>
Molecular weight	117.17	117.17
Boiling point at atm	12.4°C	54.3°F
Density of gas at 20°C and 1 atm	5.326 kg/m ³	0.3325 lb/ft ³
Specific gravity	4.12	4.12
Density of liquid at -118°C	1372.8 kg/m ³	85.76 lb/ft ³

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