

# Material Safety Data Sheet

## BoronPlus Solid Diffusion Sources



Techneglas, Inc.  
2100 N. Wilkinson Way  
Perrysburg, OH 43551

### I. Product Information

**Product Name:** BoronPlus® (GS126, 93XX; GS-139, 90XX; GS-183, 91XX; GS-245, 92XX; GS-278, 94XX)

**Synonyms:** Boron Solid Diffusion Source

**Chemical Family:** Mixture

**Chemical Formula:** N/A

**CAS Number:** N/A

**DOT Shipping Number:** N/A

**DOT Shipping Name:** Other Ceramic Articles

**DOT Hazard Class:** N/A

**EPA Hazardous Waste ID Number:** D005

### II. Chemical Ingredients

(\*) Listed under Section 313 of Title III (SARA)

	Percentage	ACGIH-TLV (Mg/m <sup>3</sup> )	OSHA-PEL (Mg/m <sup>3</sup> )
Barium Oxide	8-12*	0.5	0.5
Silicon Dioxide	31-39*	0.100 (Quartz)	0.25 (Respirable)** 0.74 (Total)**
Boron Oxide	19-36*	10	15 (Total)
Aluminum Oxide	20-35*	10	5 (Respirable) 15 (Total)
Magnesium Oxide (Fume)	1.5-2.5*	10	15 (Total)

\* = Percentages will vary between the five different BoronPlus products.

\*\* = PEL calculated using 39% SiO<sub>2</sub> (i.e. worst case scenario)

TLV and PEL are listed as time weighted averages (TWA) unless otherwise noted.

### III. Physical Properties

**Boiling Point:** N/A  
**Melting Point:** N/A  
**Vapor Pressure (mmHg):** N/A  
**Solubility in Water:** N/A  
**Vapor Density (Air =1):** N/A  
**Specific Gravity:** >1.0  
**Percent Volatile by Volume:** N/A  
**pH:** N/A  
**Appearance & Odor:** White solid, no odor.

### IV. Reactivity Data

**Stability:** Stable  
**Incompatible Materials:** None  
**Hazardous Decomposition Products:** N/A  
**Hazardous Polymerization:** Will not occur.  
**Conditions to Avoid:** N/A

### V. Fire and Explosion Data

**Flash Point:** N/A  
**Lower Explosive Limit:** N/A  
**Upper Explosive Limit:** N/A  
**Extinguishing Media:** Select for surrounding materials.  
**Special Firefighting Procedures:** Wear pressure demand self-contained breathing apparatus in conjunction with appropriate personal protective equipment.  
**Unusual Fire and Explosion Hazards:** This product is non-combustible.

### VI. Health Hazard Information

**Primary Routes of Exposure:** Inhalation.  
**Signs and Symptoms of Overexposure:** Overexposure is only possible if the material is ground into finely divided particles and suspended in air. Under these conditions, upper respiratory congestion, dyspnea, chest pain, cough, and decreased vital capacity or progressive fibrosis may result.  
**Medical Conditions Aggravated by Exposure:** Prolonged or repeated exposure may aggravate pre-existing respiratory or cardiovascular system conditions.  
**Listing as a Carcinogen:** This material is not listed as a carcinogen by the NTP, IARC, or OSHA. This material contains silicon dioxide, which is listed as a carcinogen by the NTP, IARC, and OSHA. Signs and symptoms described above are based on silicon dioxide exposure.

### VII. Emergency First Aid Procedures

**Inhalation:** Remove to fresh air. Seek medical attention, if necessary.  
**Ingestion:** Consult physician immediately.

**Eye Contact:** Immediately flush eyes for 15 minutes with large amounts of water, occasionally lifting upper and lower eyelids. If irritation persists, seek medical attention.

**Skin Contact:** Wash the affected area with soap and water. Seek medical attention if irritation persists.

#### **VIII. Control Measures**

**Engineering Controls:** General ventilation recommended under normal conditions of use. If active dust and/or fume generation occurs, local ventilation is recommended.

**Work/Hygiene Practices:** Avoid inhalation of dusts and/or fumes. If necessary, wear NIOSH/MSHA approved respiratory protection for dusts, mists, or fumes.

**Personal Protective Equipment:**

**Respiratory Protection:** If necessary, wear NIOSH/MSHA approved respiratory protection for dusts, mists, and fumes.

**Eye/Face Protection:** Recommended.

**Skin Protection:** Recommended to prevent skin irritation.

#### **IX. Storage and Disposal Information**

**Spill or Leak Procedures:** Clean up spilled material into a closed container using a high efficiency vacuum. Avoid dust generation.

**Disposal Methods:** Dispose of in accordance with local, state, or federal regulations.

**Handling and Storage Precautions:** Store in a cool, dry location.

#### **X. Manufacturer/Supplier Information**

**Prepared by:** Terry Richardson

**Date:** Aug 21, 2006

**Revision Date:** Aug 21, 2006

**24-Hour Emergency Telephone Number:** 614-443-6551

**General Information Number:** 419-873-2000

**Manufacturer's Contact:** Bill Blessing

**CHEMTREC:** (U.S.) 800-424-9300

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