

**MATERIAL SAFETY DATA SHEET
(Specialized Bead SB18)**

Bead Brite Research, LLC
4811 Lyons Tech Pkwy Suite 4
Coconut Creek, FL 33073

Revision 1.2 Date: 10/00

Product Name: Specialized Bead
SB18 1 to 18um

Chemical Abstract Service Number (CAS #): 65997-17-3 Percent: 100%

HMIS: Health: 0 Flammability: 0 Reactivity: 0

Hazardous Ingredients

<u>Hazardous Components</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>
Nuisance Dust	15mg/m3	10mg/m3
Nuisance Dust-respirable	5mg/m3	5mg/m3

Soda-lime plate glass is used in the manufacture of glass beads. The composition of this is an amorphous fusion of these oxides and not crystalline types of free oxides (silica). Therefore, no danger of silicosis exist.

SARA Title III- Information

This product is not an extremely hazardous material according to Federal Register, VOL. 51, No. 221PP 41582-41594. It is not on the toxic chemicals listed Committee Print Number 99-169 and is not a hazardous substance identified on the list of CERCLA chemicals.

Physical and Chemical Properties

Boiling Point – not measurable

Vapor Pressure – N/A

Vapor Density – N/A

Solubility in Water – N/A

Appearance and Odor – White, Tasteless, Odorless

Specific Gravity – 2.4 – 2.6g/cm3

Melting Point – Above 1100* F

Evaporation Rate – N/A

**Lot #:
SB-001**

Fire and Explosion Data

Flash Point – N/A
Extinguishing Media – Not a fire hazard
Special Fire Fighting Procedures – Not Required
Unusual Fire and Explosion Hazards - None

Flammable Limits – Does not ignite
LEL – N/A UEL – N/A

APPLICATIONS

Micro-sized beads are offered for evaluation in a variety of specialty applications. Some suggested applications are plastics, coatings, cosmetics, and oil and gas production. The small diameters provide geometrically higher surface area than current products. This enables tighter packaging, higher adsorption, and use in smaller niches.

TYPICAL PARTICLE SIZE

<u>Distribution (Percentile)</u>	<u>Microns</u>
10	0.1-2
50	4-6
90	15-18

Mean Particle Size: 5-Microns

COMPOSITION

Typical Composition of Standard Glass Beads

<u>CHEMICAL</u>	<u>% BY WEIGHT</u>
SiO ₂	70-75
Na ₂ O	12-15
CaO	7-12
MgO	<5
Al ₂ O ₃	<2.5
K ₂ O	<1.0
Fe ₂ O ₃	<0.1

CAS Registry No. 65997-17-3

OPTICAL PROPERTIES

Color: Glass beads are high quality, colorless optical crown lenses.

WEIGHT PROPERTIES

Typical bulk density range is 1.36 g/cm³ to 1.46 g/cm³

WEATHERABILITY

Weather has no noticeable effect once the surface alkalis are removed as in any soda-lime silica glass. All glasses are affected to some degree by chemical and weathering agents, but in most cases, weathering is minute. The degree of resistance to various agents is proportional to the hardness and/or refractive index. The higher the refractive index, the more susceptible the glass is to chemical attack.

ACID RESISTANCE

5-Micron beads have excellent resistance to the most common acids; exceptions are hydrofluoric acid, which attacks vigorously, and phosphoric acid, which etches them over time.

ALKALI RESISTANCE

5-Micron beads have fair resistance to mild alkalis, but strong alkali solutions, especially when hot, will etch the surface.

NOTE:

Soda-Lime plate glass is used in the manufacture of glass beads. The composition of this material is an amorphous fusion of these oxides and is not crystalline types of free oxides (silica). Therefore, no danger of silicosis exists.

HMIS HAZARD INDEX:

HEALTH	-0
FLAMMABILITY	-0
REACTIVITY	-0