



## MATERIAL SAFETY DATA SHEET

### SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

#### 1.1 - PRODUCT AND COMPANY IDENTIFICATION

Product Name: Ceramic Microspheres (Cenospheres) - All Types  
 Distributor: CenoStar Corporation  
 Suite #133  
 Address: 25 Storey Ave  
 Newburyport, MA 01950  
 USA  
 Telephone: 978-465-2705  
 Document: STD\_10013\_MSDS\_v7  
 Date Prepared: October 20, 2006

Revision History	Date	Reason:
Version 1	February 15, 2006	Initial version

### SECTION 2: INGREDIENTS

#### 2.1 - INGREDIENTS

Ingredient	C.A.S. Number	Percent by Weight
CERAMIC MICROSPHERES	66402-68-4	95.0 - 99.9%
QUARTZ SILICA	14808-60-7	0.1 – 5.0 %

In product form, no toxicological hazards exist due to all crystalline material being incased in the glass-like shell. It is classified as a nuisance dust. If product is machined, breathable particles up to 1.5% of crystalline silica may be formed.

## SECTION 3: HAZARDS IDENTIFICATION

### 3.1 - EMERGENCY OVERVIEW

#### 3.1.1 Odor, Color, Grade:

Low-density fine powder (between 10 µm and 600 µm), gray to white, odorless.

#### 3.1.2 General Physical Form:

Solid.

#### 3.1.3 immediate health, physical and environmental hazards:

May cause target organ effects. Contains a chemical or Chemicals that can cause cancer.

### 3.2 - POTENTIAL HEALTH EFFECTS

#### 3.2.1 Eye Contact:

Mechanical eye irritation: Signs and symptoms may include pain, redness, tearing and corneal abrasion.

#### 3.2.2 Skin Contact:

Mechanical skin irritation: Signs/symptoms may include abrasion, redness, pain, and itching.

#### 3.2.3 Inhalation:

Upper Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, nose and throat pain.

Lung Effects: Signs/symptoms may include difficulty breathing, cough, wheezing, weakness, increased heart rate, bluish colored skin (cyanosis), sputum production, and changes in lung function tests.

#### 3.2.4 Ingestion:

Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, nausea, diarrhea, and vomiting.

#### 3.2.5 Carcinogenicity:

Contains a chemical or chemicals that can cause cancer.

Ingredient	C.A.S No.	Class Description	Regulation
QUARTZ SILICA	14808-60-7	Group 1	International Agency for Research on Cancer
QUARTZ SILICA	14808-60-7	Known human carcinogen	National Toxicology Program Carcinogens

In product form, no toxicological hazards exist due to all crystalline material being incased in the glass-like shell. It is classified as a nuisance dust. If product is machined in any way, breathable particles of crystalline silica may be formed.

## SECTION 4: FIRST AID MEASURES

### 4.1 - FIRST AID PROCEDURES

The following first aid recommendations are based on an assumption that appropriate personnel and industrial hygiene practices are followed.

#### 4.1.1 Eye Contact:

Flush eyes with large amounts of water. If signs/symptoms persist, get medical attention.

#### 4.1.2 Skin Contact:

Wash affected area with soap and water. If signs/symptoms persist, get medical attention.

#### 4.1.3 Inhalation:

Remove person to fresh air. If signs/symptoms persist, get medical attention.

#### 4.1.4 If Swallowed:

Do not induce vomiting. Give victim two glasses of water. Never give anything by mouth to an Unconscious person. Get immediate medical attention.

## SECTION 5: FIRE AND EXPLOSION HAZARD DATA

### 5.1 - FLAMMABLE PROPERTIES

<b>Autoignition Temperature:</b>	Not Applicable
<b>Flash Point:</b>	Not Applicable
<b>Flammable Limits – LEL:</b>	Not Applicable
<b>Flammable Limits – UEL:</b>	Not Applicable

### 5.2 - EXTINGUISHING MEDIA

Non-combustible. Choose material suitable for surrounding fire.

### 5.3 - PROTECTION OF FIREFIGHTERS

#### 5.3.1 Special Fire Fighting Procedures:

Wear full protective clothing, including helmet, self, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, facemasks, and protective covering for exposed areas of the head.

#### 5.3.2 Unusual Fire and Explosion Hazards:

No unusual fire or explosion hazards are anticipated.

**Note:**

See SECTION 10: STABILITY AND REACTIVITY for hazardous combustion and thermal decomposition information

## **SECTION 6: ACCIDENTAL RELEASE MEASURES**

### **6.1 - ACCIDENTAL RELEASE MEASURES**

Collect as much of the spilled material as possible.

**In the event of a release of this material, the user should determine if the release qualifies as reportable to local, state, and federal regulations.**

## **SECTION 7: HANDLING AND STORAGE**

### **7.1 - HANDLING**

For industrial or professional use only. Avoid eye contact with dust or airborne particles. Avoid breathing of airborne material. Do not eat, drink, or smoke when using this product. Wash exposed areas thoroughly with soap and water. Use general dilution ventilation and / or local exhaust ventilation to control airborne exposures to below Occupational Exposure Limits. If Ventilation is not adequate, use respiratory protection equipment.

### **7.2 - STORAGE**

Store under normal warehouse conditions.

## **SECTION 8: EXPOSURE CONTROL / PERSONAL PROTECTION**

### **8.1 - ENGINEERING CONTROLS**

Provide local exhaust ventilation at transfer points. Use general dilution ventilation and/or local exhaust ventilation to Control airborne exposure to below Occupational Exposure Limits and/or control dust, fume, or airborne particles. If ventilation is not adequate, use respiratory protection equipment

### **8.2 - PERSONAL PROTECTIVE EQUIPMENT (PPE)**

#### **8.2.1 Eye/Face Protection:**

Avoid eye contact.

The following eye protection(s) are recommended: Indirect Vented Goggles

#### **8.2.2 Skin Protection:**

Avoid skin contact.

Select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment. Consult with your glove and protective clothing manufacturer for selection of appropriate compatible materials. Gloves made From neoprene or nitrile rubber are recommended.

#### **8.2.3 Respiratory Protection**

Avoid breathing of dust.

Select one of the following NIOSH approved respirators based on airborne concentration of contaminants and in accordance with OSHA regulations. Half face piece or full face air-purifying respirator with N95 particulate filters.

#### **8.2.4 Prevention of Swallowing:**

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water.

**8.3 - EXPOSURE GUIDELINES**

<b>Ingredient</b>	<b>Authority</b>	<b>Type</b>	<b>Limit</b>	<b>Additional Information</b>
QUARTZ SILICA	ACGIH	TWA-respirable	0.05 mg/m <sup>3</sup>	Table A2
QUARTZ SILICA	OSHA	TWA-respirable	0.1 mg/m <sup>3</sup>	Table Z-1A

**8.4 - SOURCE OF EXPOSURE LIMIT DATA**

<b>ACGIH</b>	American Conference of Governmental Industrial Hygienists
<b>CMRG</b>	Chemical Manufacturer Recommended Guideline
<b>OSHA</b>	Occupational Safety and Health Administration
<b>AIHA</b>	American Industrial Hygiene Association Workplace Environmental Exposure Level (WEEL)

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**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES****9.1 - PHYSICAL AND CHEMICAL PROPERTIES:**

<b>Odor</b>	Odorless
<b>Color</b>	Gray to white color
<b>Grade</b>	Low Density fine powder between 10µm and 600µm diameter
<b>General Physical Form</b>	Solid
<b>Autoignition temperature</b>	N/A
<b>Flash Point</b>	N/A
<b>Flammable Limits-LEL</b>	N/A
<b>Flammable Limits-UEL</b>	N/A
<b>Boiling Point</b>	N/A
<b>Density</b>	0.30 - 0.95 g/cc
<b>Vapor Density</b>	N/A
<b>Specific Gravity</b>	0.30 - 0.95 [Ref Std: Water = 1.0]
<b>pH</b>	6-8
<b>Melting Point</b>	1,200° Celsius
<b>Solubility in Water</b>	Nil
<b>Evaporation Rate</b>	N/A
<b>Volatile Organic Compounds</b>	N/A
<b>Percent volatile</b>	N/A
<b>VOC Less H<sub>2</sub>O &amp; Exempt Solvents</b>	N/A
<b>Viscosity</b>	N/A

## **SECTION 10: STABILITY AND REACTIVITY**

### **10.1 - STABILITY:**

Stable

### **10.2 - MATERIALS AND CONDITIONS TO AVOID:**

None known.

### **10.3 - HAZARDOUS POLYMERIZATION:**

Hazardous polymerization will not occur.

### **10.4 - HAZARDOUS DECOMPOSITION OR BY-PRODUCTS:**

Substance: None Known

Condition: Not Specified

## **SECTION 11: TOXICOLOGICAL INFORMATION**

### **11.1 - TOXICOLOGICAL INFORMATION:**

In product form, no toxicological hazards exist due to all crystalline material being incased in the glass-like shell. It is classified as a nuisance dust. If product is machined in any way, breathable particles of crystalline silica may be formed.

## **SECTION 12: ECOLOGICAL INFORMATION**

### **12.1 - ECOTOXICOLOGICAL INFORMATION:**

Not Determined

### **12.2 - CHEMICAL INFORMATION:**

Not Determined

## **SECTION 13: DISPOSAL CONSIDERATIONS**

### **13.1 - WASTE DISPOSAL METHOD**

Reclaim if feasible. Dispose of waste product in a facility permitted to accept chemical waste.

### **13.2 - EPA HAZARDOUS WASTE NUMBER (RCRA)**

Not Regulated

**Since regulations vary, consult applicable regulations or authorities before disposal.**

## SECTION 14: TRANSPORTATION CONSIDERATIONS

### 14.1 - TRANSPORTATION CONSIDERATIONS

#### 14.1.1 ID Number(s):

- 70-0705-7208-9
- 70-0705-7216-2
- 70-0705-7217-0
- 70-0705-7218-8
- 70-0707-4976-0

## SECTION 15: REGULATORY INFORMATION

### 15.1 - INTERNATIONAL REGULATIONS

Not regulated

### 15.2 - US FEDERAL REGULATIONS

Not regulated

This MSDS has been prepared to meet the US OSHA Hazard Communication Standard 29 CFR 1910.1200

### 15.3 - STATE REGULATIONS

Not regulated

### 15.2 - 311/312 Hazard Categories

**Fire Hazard:** No    **Pressure Hazard:** No    **Reactivity Hazard:** No    **Immediate Hazard:** No    **Delayed Hazard:** Yes

### 15.4 - CHEMICAL INVENTORIES

This product is an article defined by TSCA regulations and is exempt from TSCA Inventory listing requirements.

#### Additional Information:

Product is defined as an article by TSCA, EINECS, CDSL, MITI, KECI, AICS, PICCS and CICS, and is exempt from chemical inventory listing requirements.

## SECTION 16: OTHER INFORMATION

### 16.1 - National Fire Protection Association (NFPA) Hazard Classifications

**Health:** 1            **Flammability:** 0            **Reactivity:** 0            **Special Hazards:** None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presentsd by short term acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are know to be generated in significant quantities.

## 16.2 - Hazardous Material Identification System (HMIS®) Hazard Classifications

**Health:** 1    **Flammability:** 0    **Reactivity:** 0    **Protection:** X - (See PPE section)

Hazardous Material Identification System (HMIS®) hazard ratings are designed to inform employees of chemical hazards in the workplace. These ratings are based on the inherent properties of the material under expected conditions of normal use and are not intended for emergency situations. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint and Coatings Association (NPCA)

## 16.3 Reason for Revision

This MSDS was revised on October 20, 2006 to meet the requirements of the 16 section ANSI/ISO format. The potential hazards of the product have not changed.

No other revision information is available.

### **DISCLAIMER:**

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