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SAFETY DATA SHEET
(GHS Safety Data Sheet)

Ceramic Microspheres (cenospheres)

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

1.1 - PRODUCT AND COMPANY IDENTIFICATION

Product Name:	Ceramic Microspheres (Cenospheres) - All Types
Distributor:	CenoStar Corporation
Address:	Suite #133 25 Storey Ave Newburyport, MA 01950 USA
Telephone:	978-465-2705
Document:	STD_SDS_US_v19
Date Prepared:	April 20, 2018

Revision History	Date	Reason:
Version 1	February 15, 2006	Initial version
Version 19	March 31, 2019	Updated

SECTION 2: INGREDIENTS

2.1 - INGREDIENTS

Ingredient	C.A.S. Number	Percent by Weight
CERAMIC MICROSPHERES	68131-74-8	95.0 - 99.9%
QUARTZ SILICA	14808-60-7	0.1 – 2.0 %

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.

2.2. Classification of the Substance or Mixture

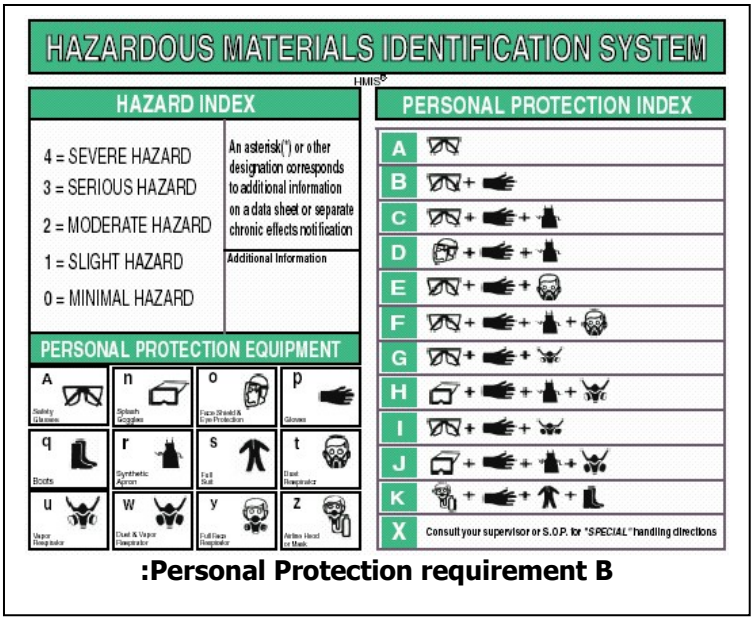
Classification (GHS-US)

Carc. 1A H350
STOT RE 1 H372

2.3 Label Elements:

GHS-US Labeling

Hazardous Pictograms (GHS-US)



:Personal Protection requirement B

Signal Word (GHD-US) :Danger

Hazard Statement (GHS-US)
:H319- Causes Skin Irritation
:H350- May Cause Cancer (inhalation)
:H372- Causes damage to organs (lung/respiratory system) through prolonged or repeated exposure(Inhalation)
:P201- Obtain special instructions before use
:P202- Do not handle until all safety precautions have been read and understood
:P260 Do not breathe dust
:P264-Wash hands, forearms, and exposed areas thoroughly after handling
:P270- Do not eat drink or smoke when using this product
:P280 Wear eye protection, protective clothes and gloves
:P302+P352- If On Skin: wash with plenty of soap and water
:P305+P351+P338-If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easier to do. Continue rinsing
P308+P313 – If exposed or concerned: Get medical attention/advice.
P321 – Specific treatment (See section 4)
P332+P313 – If skin irritation occurs: Get medical attention/ advice.
P337+P313 – If eye irritation persists: Get medical attention/ advice.
P362- Take off contaminated clothing and wash before reuse.
P501- Dispose of contents/container according to local, regional, national, and international regulations.

2.3 Other Hazards

Other Hazards Not Contributing to the Classification: Smoking increases the risk of bronchitis, silicosis, and lung cancer that is associated with this product.

2.4 Unknown Acute Toxicity (GHS-US)

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

Autoignition Temperature:	Not Applicable
Flash Point:	Not Applicable
Flammable Limits – LEL:	Not Applicable
Flammable Limits – UEL:	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

Ingredient	Authority	Type	Limit	Additional Information
QUARTZ SILICA	ACGIH	TWA-respirable	0.05 mg/m3	Table A2
QUARTZ SILICA	OSHA	TWA-respirable	0.1 mg/m3	Table Z-1A

8.4 - SOURCE OF EXPOSURE LIMIT DATA

ACGIH	American Conference of Governmental Industrial Hygienists
CMRG	Chemical Manufacturer Recommended Guideline
OSHA	Occupational Saftey and Health Administration
AIHA	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:

Odor	Odorless
Color	Gray to white color
Grade	Low Density fine powder between 10µm and 600µm diameter
General Physical Form	Solid
Autoignition temperature	N/A
Flash Point	N/A
Flammable Limits-LEL	N/A
Flammable Limits-UEL	N/A
Boiling Point	N/A
Density	0.30 - 0.45 g/cc
Vapor Density	N/A
Specific Gravity	0.30 - 0.95 [Ref Std: Water = 1.0]
pH	6-8
Melting Point	1,200° Celsius
Solubility in Water	Nil
Evaporation Rate	N/A
Volatile Organic Compounds	N/A
Percent volatile	N/A
VOC Less H20 & Exempt Solvents	N/A
Viscosity	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 IN ACCORDANCE WITH DOT Not regulated for transport
14.2 IN ACCORDANCE WITH IMDG Not regulated for transport
14.3 IN ACCORDANCE WITH IATA Not regulated for transport

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

15.4 - 311/312 Hazard Categories
Fire Hazard: No **Pressure Hazard:** No **Reactivity Hazard:** No **Immediate Hazard:** No **Delayed Hazard:** Yes

15.5 - CHEMICAL INVENTORIES
CenoStar Cenosphere doesn't require hazard warning label under the United States EPA/European Waste Catalog. HS Commodity Code: 26219-00000 is suitable CAS No. 68131-74-8 Ashes Residue. TSCA – Product is listed on Toxic Substance Control Act, Canada DSL and all other International Inventories

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)

Inventory	CAS# 93924-19-7	CAS# 68131-74-8

	Ashes (residues)	Ashes (residues
TSCA (USA)	Not found	Listed
EINECS (EU)	Listed (300-212-6)	Listed (268-627-4)
AICS (AUS)	Not found	Listed
DSL (CAN)	Not found	Listed
NDSL (CAN)	Not found	Not found

16.3 Reason for Revision

This MSDS was revised on January 26, 2017 to meet the requirements of the 16 section ANSI/ISO format. The potential hazards of theproduct have not changed.

No other revision information is available.

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