



## Material Safety Data Sheet

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### SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** ZEEOSPHERES (TM) Ceramic Microspheres (All Types)

**MANUFACTURER:** 3M

**DIVISION:** Specialty Materials

**ADDRESS:** 3M Center  
St. Paul, MN 55144-1000

EMERGENCY PHONE: 1-800-364-3577 or (651) 737-6501 (24 hours)

**Issue Date:** 03/29/2004

**Supersedes Date:** 02/24/2004

**Document Group:** 06-4470-8

**Product Use:**

Specific Use: Additive for Paint, Coating and Film Applications

### SECTION 2: INGREDIENTS

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>% by Wt</u>
CERAMIC MICROSPHERES	66402-68-4	100

### SECTION 3: HAZARDS IDENTIFICATION

#### 3.1 EMERGENCY OVERVIEW

**Odor, Color, Grade:** Fine Powder, less than 200 um diameter, gray to white color, odorless

**General Physical Form:** Solid

**Immediate health, physical, and environmental hazards:**

#### 3.2 POTENTIAL HEALTH EFFECTS

**Eye Contact:**

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

**Skin Contact:**

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

**Inhalation:**

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

**Ingestion:**

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

## SECTION 4: FIRST AID MEASURES

### 4.1 FIRST AID PROCEDURES

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

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

**Skin Contact:** Wash affected area with soap and water. If signs/symptoms develop, get medical attention.

**Inhalation:** Remove person to fresh air. If signs/symptoms develop, get medical attention.

**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 FIGHTING MEASURES

### 5.1 FLAMMABLE PROPERTIES

Autoignition temperature	<i>Not Applicable</i>
Flash Point	<i>Not Applicable</i>
Flammable Limits - LEL	<i>Not Applicable</i>
Flammable Limits - UEL	<i>Not Applicable</i>
OSHA Flammability Classification:	Not Applicable

### 5.2 EXTINGUISHING MEDIA

Non-combustible. Choose material suitable for surrounding fire.

### 5.3 PROTECTION OF FIRE FIGHTERS

**Special Fire Fighting Procedures:** Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

**Unusual Fire and Explosion Hazards:** No unusual fire or explosion hazards are anticipated.

**Note:** See STABILITY AND REACTIVITY (SECTION 10) for hazardous combustion and thermal decomposition information.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

**Accidental Release Measures:** Observe precautions from other sections. Call 3M- HELPS line (1-800-364-3577) for more information on handling and managing the spill. Evacuate unprotected and untrained personnel from hazard area. The spill should be cleaned up by qualified personnel. Ventilate the area with fresh air. Collect as much of the spilled material as possible. Use wet sweeping compound or water to avoid dusting. Sweep up. Clean up residue. Place in a closed container approved for transportation by appropriate authorities. Dispose of collected material as soon as possible.

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

## SECTION 7: HANDLING AND STORAGE

### 7.1 HANDLING

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. For industrial or professional use only. Avoid eye contact with dust or airborne particles.

### 7.2 STORAGE

Store under normal warehouse conditions.

## SECTION 8: EXPOSURE CONTROLS/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 exposures 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 prolonged or repeated 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/or protective clothing manufacturer for selection of appropriate compatible materials.

Gloves made from the following material(s) are recommended: Neoprene, Nitrile Rubber.

#### 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 facepiece or fullface air-purifying respirator with N95 particulate filters. Consult the current 3M Respiratory Selection Guide for additional information or call 1-800-243-4630 for 3M technical assistance.

#### 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

**None Established**

**EXPOSURE LIMITS FOR PARTICULATES:**

ACGIH TLV-TWA PARTICULATES (INSOLUBLE) NOT OTHERWISE CLASSIFIED (PNOC)

10 mg/m3, inhalable particulate

3 mg/m3, respirable fraction

OSHA PEL PARTICULATES NOT OTHERWISE REGULATED (PNOR)

15 mg/m3, total dust

5 mg/m3, respirable fraction

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

<b>Odor, Color, Grade:</b>	Fine Powder, less than 200 um diameter, gray to white color, odorless
<b>General Physical Form:</b>	Solid
<b>Autoignition temperature</b>	<i>Not Applicable</i>
<b>Flash Point</b>	<i>Not Applicable</i>
<b>Flammable Limits - LEL</b>	<i>Not Applicable</i>
<b>Flammable Limits - UEL</b>	<i>Not Applicable</i>
<b>Boiling point</b>	<i>Not Applicable</i>
<b>Vapor Density</b>	<i>Not Applicable</i>
<b>Vapor Pressure</b>	<i>Not Applicable</i>
<b>Specific Gravity</b>	2.1 - 2.5 g/cm3
<b>pH</b>	<i>Not Applicable</i>
<b>Melting point</b>	<i>Not Applicable</i>
<b>Solubility in Water</b>	Nil
<b>Evaporation rate</b>	<i>Not Applicable</i>
<b>Volatile Organic Compounds</b>	<i>Not Applicable</i>
<b>Percent volatile</b>	<i>Not Applicable</i>
<b>VOC Less H2O &amp; Exempt Solvents</b>	<i>Not Applicable</i>
<b>Viscosity</b>	<i>Not Applicable</i>

**SECTION 10: STABILITY AND REACTIVITY**

**Stability:** Stable.

**Materials and Conditions to Avoid:** None known

**Hazardous Polymerization:** Hazardous polymerization will not occur.

**Hazardous Decomposition or By-Products**

Substance

None known.

Condition

Not Specified

## SECTION 11: TOXICOLOGICAL INFORMATION

Please contact the address listed on the first page of the MSDS for Toxicological Information on this material and/or its components.

## SECTION 12: ECOLOGICAL INFORMATION

### ECOTOXICOLOGICAL INFORMATION

Not determined.

### CHEMICAL FATE INFORMATION

Not determined.

## SECTION 13: DISPOSAL CONSIDERATIONS

**Waste Disposal Method:** Reclaim if feasible. Dispose of waste product in a facility permitted to accept chemical waste.

**EPA Hazardous Waste Number (RCRA):** Not regulated

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

## SECTION 14: TRANSPORT INFORMATION

### ID Number(s):

70-0705-2174-8, 70-0705-2175-5, 70-0705-2176-3, 70-0705-2177-1, 70-0705-2178-9, 70-0705-2179-7, 70-0705-2180-5, 70-0705-2181-3, 70-0705-2182-1, 70-0705-2183-9, 70-0705-2184-7, 70-0705-2185-4, 70-0705-2186-2, 70-0705-2187-0, 70-0705-2188-8, 70-0705-2189-6, 70-0705-2190-4, 70-0705-2191-2, 70-0705-2192-0, 70-0705-2193-8, 70-0705-2194-6, 70-0705-2195-3, 70-0705-2196-1, 70-0705-2197-9, 70-0705-2198-7, 70-0705-2199-5, 70-0705-7104-0, 70-0705-7105-7, 70-0705-7106-5, 70-0705-7107-3, 70-0705-7108-1, 70-0705-7109-9, 70-0705-7110-7, 70-0705-7111-5, 70-0705-7112-3, 70-0705-7113-1, 70-0705-7114-9, 70-0705-7115-6, 70-0705-7116-4, 70-0705-7117-2, 70-0705-7118-0, 70-0705-7119-8, 70-0705-7120-6, 70-0705-7121-4, 70-0705-7122-2, 70-0705-7123-0, 70-0705-7124-8, 70-0705-7125-5, 70-0705-7126-3, 70-0705-7127-1, 70-0705-7128-9, 70-0705-7129-7, 70-0705-7130-5, 70-0705-7131-3, 70-0705-7132-1, 70-0705-7133-9, 70-0705-7134-7, 70-0705-7135-4, 70-0705-7136-2, 70-0705-7137-0, 70-0705-7138-8, 70-0705-7139-6, 70-0705-7140-4, 70-0705-7141-2, 70-0705-7142-0, 70-0705-7143-8, 70-0705-7144-6, 70-0705-7145-3, 70-0705-7146-1, 70-0705-7147-9, 70-0705-7148-7, 70-0705-7149-5, 70-0705-7150-3, 70-0705-7151-1, 70-0705-7152-9, 70-0705-7153-7, 70-0705-7154-5, 70-0705-7155-2, 70-0705-7156-0, 70-0705-7157-8, 70-0705-7158-6, 70-0705-7159-4, 70-0705-7160-2, 70-0705-7161-0, 70-0705-7162-8, 70-0705-7163-6, 70-0705-7164-4, 70-0705-7165-1, 70-0705-7166-9, 70-0705-7167-7, 70-0705-7168-5, 70-0705-7169-3, 70-0705-7170-1, 70-0705-7171-9, 70-0705-7172-7, 70-0705-7173-5, 70-0705-7174-3, 70-0705-7175-0, 70-0705-7949-8, 70-0705-7950-6, 70-0705-7951-4, 70-0705-7952-2, 70-0705-7953-0, 70-0705-7954-8, 70-0705-7955-5, 70-0705-7956-3, 70-0705-7957-1, 70-0705-7958-9, 70-0705-7959-7, 70-0705-7960-5, 70-0706-6119-7, 70-0707-0691-9, 70-0707-0692-7, 70-0707-0693-5, 70-0707-0700-8, 70-0707-0701-6, 70-0707-0702-4, 98-0212-1052-5, 98-0212-1053-3, 98-0212-1054-1, 98-0212-1055-8, 98-0212-1056-6, 98-0212-1057-4, 98-0212-1058-2, 98-0212-1059-0, 98-0212-1060-8, 98-0212-1061-6, 98-0212-1062-4, 98-0212-1063-2, 98-0212-1064-0, 98-0212-1065-7, 98-0212-1066-5, 98-0212-1067-3, 98-0212-1068-1, 98-0212-1069-9, 98-0212-1070-7, 98-0212-1071-5, 98-0212-1072-3, 98-0212-1073-1, 98-0212-1074-9, 98-0212-1075-6, 98-0212-1076-4, 98-0212-1077-2, 98-0212-1078-0, 98-0212-1079-8, 98-0212-1080-6, 98-0212-1085-5, 98-0212-1086-3, 98-0212-1087-1, 98-0212-1088-9, 98-0212-1089-7, 98-0212-1090-5, 98-0212-1117-6, 98-0212-1120-0, 98-0212-1122-6, 98-0212-1123-4, 98-0212-1168-9, 98-0212-1198-6, 98-0212-1199-4, 98-0212-2700-8, 98-0212-2701-6, 98-0212-2706-5, 98-0212-2707-3, 98-0212-2708-1, 98-0212-2709-9, 98-0212-2712-3, 98-0212-2846-9, 98-0212-2847-7, 98-0212-2848-5, 98-0212-2849-3, 98-0212-2850-1, 98-0212-2851-9, 98-0212-2899-8, 98-0212-2909-5, 98-0212-2931-9

Please contact the emergency numbers listed on the first page of the MSDS for Transportation Information for this material.

## SECTION 15: REGULATORY INFORMATION

### US FEDERAL REGULATIONS

Contact 3M for more information.

#### 311/312 Hazard Categories:

Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - No

### STATE REGULATIONS

Contact 3M for more information.

### CHEMICAL INVENTORIES

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

Contact 3M for more information.

**Additional Information:** This product is an article as defined by EINECS, CDSL, MITI, KECI, AICS, PICCS and CICS regulations, and is exempt from chemical inventory listing requirements. Korea and China also require product registration.

### INTERNATIONAL REGULATIONS

Contact 3M for more information.

This MSDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

## SECTION 16: OTHER INFORMATION

### NFPA Hazard Classification

Health: 0 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 presented 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 known to be generated in significant quantities.

### HMIS Hazard Classification

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

Hazardous Material Identification System (HMIS(r)) 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 use in emergency situations. HMIS(r) ratings are to be used with a fully implemented HMIS(r) program. HMIS(r) is a registered mark of the National Paint and Coatings Association (NPCA).

#### Revision Changes:

Section 16: NFPA hazard classification heading was modified.  
Section 16: HMIS hazard classification heading was modified.  
Section 8: Exposure guidelines comment was modified.  
Section 15: 311/312 hazard categories heading was modified.  
Section 15: International regulations information was modified.  
Section 15: State regulations information was modified.  
Section 15: US federal regulations information was modified.  
Section 10: Hazardous polymerization heading was modified.  
Section 16: HMIS explanation was modified.  
Section 16: NFPA explanation was modified.  
Section 15: Inventories information was modified.  
Section 12: Ecotoxicological information heading was modified.  
Section 12: Chemical fate information heading was modified.  
Sections 3 and 9: Odor, color, grade information was modified.  
Section 16: NFPA hazard classification for special hazards was modified.  
Section 8: Exposure guidelines information - none - was modified.  
Section 15: Inventories comment was modified.  
Section 12: Ecotoxicological phrase was modified.  
Section 12: Chemical Fate phrase was modified.  
Section 2: Ingredient phrase was added.

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