

# MATERIAL SAFETY DATA SHEETS

**COMPANY:** Graystar\*LLC  
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## 1. PRODUCT IDENTIFICATION/DESCRIPTION

**PRODUCT NAME:** Bubble Zirconia  
**SYNONYMS:** Line Stabilized Bubble Zirconia, Zirconia Q1 Bubble  
**CHEMICAL NAME:** Zirconia Oxide

## 2. COMPOSITION

<u>Ingredient</u>	<u>CAS#</u>	<u>Typical(%)</u>	<u>PEL-OSHA</u> (mg/m <sup>3</sup> )	<u>TLV-ACGIH</u> (mg/m <sup>3</sup> )	<u>Carcinogen</u>
ZrO <sub>2</sub>	1314-23-4	>94%	5	5	N
CaO	1305-78-8	3 - 5%	5	5	N
HfO <sub>2</sub>	12055-23-1	1 - 3%	0.5	0.5	N
Al <sub>2</sub> O <sub>3</sub>	1344-28-1	0 - 1%	10	10	N

\*Materials are regulated under OSHA 29 CFR 1900.1200, Hazard Communication Standard.

\*Source of exposure limit data; ACGIH Threshold Limit Values; (OSHA Tables Z-1-A, Z-2, Z-3)

\*All ingredients are listed under TSCA.

## 3. PHYSICAL AND CHEMICAL DATA

Melting Point: 2700 C  
Solubility in Water: Insoluble  
Specific Gravity: 5.8  
Appearance & Odor: Bubble or granular, yellow, no order

## 4. FIRE FIGHTING MEASURES

**FLASH POINT:** Not Applicable  
**FLAMMABLE LIMITS:** LEL: Not Applicable UEL: Not Applicable  
**EXTINGUISHING MEDIA:** NAIF.  
**SPECIAL FIRE PROCEDURES:** None  
**FIRE AND EXPLOSION HAZARDS:** None.

### 5. HEALTH, FIRST AID AND MEDICAL DATA

<b>INHALATION:</b>	<u>Acute:</u> May cause coughing, shortness of breath. <u>Chronic:</u> May affect breathing capacity	Remove to fresh air. Use facial respirator as needed. Obtain first aid/medical assistance.
<b>INGESTION:</b>	No known adverse effects, but ingestion needed. not recommended.	Obtain first aid/medical assistance if needed.
<b>SKIN CONTACT &amp; ABSORPTION:</b>	Not absorbed through skin	Obtain first aid/medical assistance if needed.
<b>EYE:</b>	May irritate eyes	Wash with large amounts of water. Obtain first aid/medical assistance if needed.
<b>OTHER RISKS:</b>	None know.	N/A

### 6. CORROSIVITY

<b>STABILITY:</b>	Stable
<b>POLYMERIZATION:</b>	Will Not Occur
<b>INCOMPATIBILITY:</b>	None
<b>DECOMPOSITION PRODUCTS:</b>	None
<b>CONDITIONS TO BE AVOIDED:</b>	None

### 7. HANDLING AND STORAGE

**Normal storage and handling:** Handle with adequate ventilation for nuisance dust. See OSHA 29CFR1910.94 (Ventilation) and CFR1910.1000 (Air contaminants)

**Normal Use:** Handle with adequate ventilation for nuisance dust. See OSHA 29CFR1910.94 (Ventilation) and CFR1910.1000 (Air contaminants). Respirators and eye protection should be worn (See OSHA 29CFR1910.134) Local & Mechanical ventilation is recommended. Use protective gloves if desired.

**Waste Disposal Methods:** Standard landfill methods consistent with applicable Federal, State and Local laws.

### 8. DISCLAIMER

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