

# SAFETY DATA SHEET

## SPIRALCAST DENSE

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name. . . . . : SPIRALCAST DENSE  
General Use. . . . . : A low cement refractory castable for placement by vibration casting.

#### DISTRIBUTOR:

Spiral Arts, Inc.  
901 NW 49th St.  
Seattle, WA 98107

#### TELEPHONE:

Phone. . . . . : (206) 768-9765  
Contact : Fred Metz

### 2. HAZARDS IDENTIFICATION

**CLASSIFICATION:** Carcinogenicity, Category 2 Skin irritation, Category 3  
Eye irritation, Category 2B Target organ toxicity (repeated)-lungs, Category 1

#### LABELING:

**Symbol:** Health hazard

**Signal word:** Warning

**Hazard statement:** Suspected of causing cancer

**Precautionary statement:** Excessive inhalation of dust will increase the risk of silicosis. Some medical studies have concluded that there is sufficient evidence in humans for the carcinogenicity of inhaled crystalline silica in the form of quartz or cristobalite from occupational sources. Avoid prolonged exposure to dust. Provide adequate ventilation and use suitable respirators if dust conditions warrant.



### 3. COMPOSITION/HAZARDOUS INGREDIENTS

<u>Ingredient</u>	<u>CAS Registry #</u>	<u>Percent</u>	<u>Exposure Limits</u>
Alumina	1344-28-1	<7	OSHA PEL = 15mg/m <sup>2</sup> total, 5mg/m <sup>2</sup> resp. dust; ACGIH TLV = 10mg/m <sup>2</sup> total dust. See note 1.
Alumina silicate	1302-93-8	45-60	OSHA PEL = 15mg/m <sup>2</sup> total dust; 5mg/m <sup>2</sup> respirable dust. ACGIH TLV = 2mg/m <sup>2</sup> resp. dust.
Cement, Calcium Aluminate	65997-16-2	<5	OSHA PEL = 15mg/m <sup>2</sup> total, 5mg/m <sup>2</sup> resp. dust; ACGIH TLV = 10mg/m <sup>2</sup> total dust. See note 1.
Cristobalite	14464-46-1	<1	OSHA PEL = ½[(10mg/m <sup>2</sup> )/(%Silica+2)] resp. dust; ACGIH TLV = 0.025mg/m <sup>2</sup> respirable dust.
Quartz	14808-60-7	<3	OSHA PEL = [(10mg/m <sup>2</sup> )/(%Silica+2)] resp. dust; ACGIH TLV = 0.025mg/m <sup>2</sup> respirable dust.
Silica Fume, Amorphous	69012-64-2	<10	OSHA PEL = 15mg/m <sup>2</sup> total dust; ACGIH TLV = 2mg/m <sup>2</sup> respirable dust.
Silica, Amorphous (Glass)	7631-86-9	5-20	OSHA PEL = 80mg/m <sup>2</sup> /% silica ACGIH TLV = 3 mg/m <sup>2</sup> respirable dust.
Zircon	14940-68-2	5-20	OSHA PEL = 5mg/m <sup>2</sup> resp. dust as Zr; ACGIH TLV = 5mg/m <sup>2</sup> resp. dust as Zr.

Some of the above ingredients are integral mineralogical constituents contained within the matrix of the raw materials.

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### 4. FIRST AID MEASURES

- Eyes. . . . . : Flush eyes thoroughly with water for at least 15 minutes. Consult physician.
- Skin. . . . . : Wash with a mild soap and water.
- Ingestion. . . . . : No adverse effects anticipated by swallowing.
- Inhalation. . . . . : Remove to fresh air. If not breathing, give artificial respiration. Get immediate medical attention.

### 5. FIRE FIGHTING MEASURES

- Fire and Explosion Hazards. . . : SPIRALCAST DENSE is non-combustible and will not contribute to the intensity of a fire.
- Flash Point and Method. . . . . : Not Applicable.
- Flammable Limits. . . . . : Not Applicable.
- Autoignition Temperature. . . . : Not Applicable.
- Extinguishing Media. . . . . : As appropriate for the surrounding fire.
- Fire Fighting Equipment. . . . . : As appropriate for the surrounding fire.

### 6. ACCIDENTAL RELEASE MEASURES

- Spill/Leak Procedures. . . . . : Reuse any spilled material where possible. Carefully scoop material into a suitable container. If conditions warrant, clean-up personnel should wear approved respiratory protection, gloves, and goggles to prevent irritation from contact and/or inhalation. Spilled material poses no threat to the environment. See section 12.

### 7. HANDLING AND STORAGE

- Handling. . . . . : SPIRALCAST DENSE requires no special handling other than adherence to good industrial practices.
- Storage. . . . . : Contact with water will cause material to set-up and become unusable.

### 8. EXPOSURE CONTROL/PERSONAL PROTECTION

- Ventilation. . . . . : Provide adequate general ventilation and local ventilation to control mist and/or dust levels below the TLV.
- Personal Protective Equipment
- Eyes. . . . . : Goggles
- Skin. . . . . : Long sleeve clothing
- Inhalation. . . . . : Dust mask
- Other. . . . . : Gloves

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**9. PHYSICAL AND CHEMICAL PROPERTIES**

Boiling Point. . . . . : Not Applicable.  
Vapor Pressure. . . . . : Not Applicable.  
Vapor Density. . . . . : Not Applicable.  
Solubility in Water. . . . . : Slight  
Specific Gravity (H<sub>2</sub>O=1). . . : 2.6  
Melting Point. . . . . : >3100°F  
pH. . . . . : 10 - 11.5 (10% Aqueous Slurry)

**10. STABILITY AND REACTIVITY**

Chemical Stability. . . . . : SPIRALCAST DENSE is stable under normal ambient and anticipated conditions of temperature and pressure.  
Incompatible Materials and Conditions to Avoid. . . . . : None.  
Hazardous Polymerization. . . : Will not occur.  
Hazardous Decomposition. . . : Will not occur.

**11. TOXICOLOGICAL INFORMATION**

There are no known health effects that can arise from the as-manufactured SPIRALCAST DENSE. There is no evidence to suggest that SPIRALCAST DENSE itself is carcinogenic.

**12. ECOLOGICAL INFORMATION**

SPIRALCAST DENSE is virtually insoluble and immobile and poses no threat to the environment if accidentally released on land or into water.

**13. DISPOSAL CONSIDERATIONS**

SPIRALCAST DENSE as-manufactured is not considered a hazardous waste. However, before destruction of the refractory lining, customers are advised to evaluate any changes to the product that may occur by the introduction of substances or operating conditions outside the control of the vendor.

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**14. TRANSPORT INFORMATION**

SPIRALCAST DENSE is not a DOT Hazardous Material and contains no DOT Hazardous components.

**15. REGULATORY INFORMATION**

Section 2 lists OSHA exposure limits for chemicals considered by OSHA to be air contaminants.

**16. OTHER INFORMATION**

Although reasonable care has been taken in the preparation of the information contained herein, Spiral Arts, Inc. extends no warranties, makes no representations and assumes no responsibility as to the accuracy or suitability of such information for application to purchaser's intended purposes or for consequences of its use.

**WARNING: This product may contain respirable crystalline silica; a chemical known to the State of California to cause cancer.**

**Health Hazard . . . . .** : 2-Moderate  
**Flammability Hazard . . . .** : 0-Minimal  
**Reactivity Hazard . . . . .** : 0-Minimal  
**Personal Protection . . . . .** : E-Glasses, gloves, dust mask