

## SAFETY DATA SHEET

### PORCELAIN POWDER

#### SECTION 1: Identification of the substance/mixture and of the company/undertaking

##### 1.1. Product identifier

Product Name	Porcelian Powder or Alumino Silicate
Product code	SM400901R, SM300805R, SM300810R, SM300850R

##### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Product Use	[SU3] Industrial uses: Uses of substances as such or in preparations at industrial sites;
Description	Foundry material.

##### 1.3. Details of the supplier of the safety data sheet

Address	3535 Briarfield Boulevard, Maumee, OH 43537 USA
Web	www.ransom-randolph.com
Telephone	+1 (419) 865-9497
Fax	+1 (419) 865-9997
Email	RR.SDS@dentsply.com
Email address of the competent person	RR.SDS@dentsply.com

##### 1.4. Emergency telephone number


Emergency telephone number	USA +1 419 865 9497
Company	Ransom & Randolph Co. 07:30 to 16:30 (Eastern Std. / GMT minus 5)

#### SECTION 2: Hazards identification

##### 2.1. Classification of the substance or mixture

2.1.1. Classification - 1999/45/EC	Xn; R48/20 Symbols: Xn: Harmful.
Main hazards	Harmful: danger of serious damage to health by prolonged exposure through inhalation.

##### 2.2. Label elements

Symbols	Xn: Harmful. 
Risk phrases	R48/20 - Harmful: danger of serious damage to health by prolonged exposure through inhalation.
Safety phrases	S22 - Do not breathe dust. S24/25 - Avoid contact with skin and eyes. S24 - Avoid contact with skin. S38 - In case of insufficient ventilation, wear suitable respiratory equipment.
Precautionary Phrases	Danger.

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## 2.2. Label elements

H350i - May cause cancer by inhalation.  
 H372 - Causes damage to organs (lungs) 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.  
 P270 - Do not eat, drink or smoke when using this product.  
 P285 - In case of inadequate ventilation wear respiratory protection.  
 P308+P313 - IF exposed or concerned: Get medical advice/attention.  
 P501 - Dispose of contents/container to local and national regulations.

### Further information

Not applicable. PBT and vPvB assessment.

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

#### 67/548/EEC / 1999/45/EC

Chemical Name	Index No.	CAS No.	EC No.	REACH Registration Number	Conc. (%w/w)	Classification	M-factor.
Silica (cristobalite)		14464-46-1	238-455-4		10 - 20%	Xn; R48/20	
Mullite		1302-93-8	215-113-2		40 - 70%		
silica (amorphous)		7631-86-9	231-545-4		10 - 20%		

#### EC 1272/2008

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### Further information

Full text for all Risk Phrases mentioned in this section are displayed in Section 16.

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

Inhalation	Move the exposed person to fresh air.
Eye contact	Rinse immediately with plenty of water for 15 minutes holding the eyelids open.
Skin contact	Wash with soap and water.
Ingestion	Drink 1 to 2 glasses of water. DO NOT INDUCE VOMITING.

### 4.2. Most important symptoms and effects, both acute and delayed

Inhalation	May cause irritation to respiratory system.
Eye contact	May cause irritation to eyes.
Skin contact	May cause irritation to skin.
Ingestion	May cause irritation to mucous membranes.

### 4.3. Indication of any immediate medical attention and special treatment needed

Inhalation	Seek medical attention if irritation or symptoms persist.
Eye contact	Seek medical attention if irritation or symptoms persist.
Skin contact	Seek medical attention if irritation or symptoms persist.
Ingestion	Seek medical attention if irritation or symptoms persist.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Use extinguishing media appropriate to the surrounding fire conditions.

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## 5.2. Special hazards arising from the substance or mixture

Burning produces irritating, toxic and obnoxious fumes.

## 5.3. Advice for firefighters

Self-contained breathing apparatus. Wear suitable protective clothing.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

Avoid raising dust. Wear suitable respiratory equipment when necessary.

### 6.2. Environmental precautions

No environmental requirements.

### 6.3. Methods and material for containment and cleaning up

Avoid raising dust. Clean the area using a vacuum cleaner. Transfer to suitable, labelled containers for disposal.

### 6.4. Reference to other sections

See section [2, 8 & 13] for further information.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Avoid raising dust. Ensure adequate ventilation of the working area. In case of insufficient ventilation, wear suitable respiratory equipment.

Do not eat, drink or smoke in areas where this product is used or stored. Wash hands after handling the product.

### 7.2. Conditions for safe storage, including any incompatibilities

Keep containers tightly closed.

### 7.3. Specific end use(s)

Foundry material.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

exposure limits - Silica, vitreous (fused, amorphous) 80 mg/m<sup>3</sup> / (% Silica), TWA PEL (respirable fraction).

exposure limits - Crystalline Silica, Cristobalite - 0.025 mg/m<sup>3</sup> TWA ACGIH TLV (respirable fraction); 10 mg/m<sup>3</sup> / [2(% Silica + 2)] TWA PEL (respirable fraction).

### 8.2. Exposure controls

#### 8.2.1. Appropriate engineering controls

Ensure adequate ventilation of the working area.

#### 8.2.2. Individual protection measures

Protective clothing.

#### Eye / face protection

In case of splashing, wear: Approved safety goggles. safety glasses with side-shields.

#### Skin protection - Handprotection

Wear suitable gloves.

#### Respiratory protection

Suitable respiratory equipment.

#### 8.2.3. Environmental exposure controls

Not normally required.

#### Occupational exposure controls

Appropriate local exhaust ventilation is required.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

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## 9.1. Information on basic physical and chemical properties

<b>Appearance</b>	Solid
<b>Colour</b>	Off white
<b>Odour</b>	Odourless
<b>Odour threshold</b>	No data available
<b>pH</b>	6.5 - 8
<b>Melting point</b>	No data available
<b>Freezing Point</b>	Not applicable.
<b>Initial boiling point</b>	Not applicable.
<b>Flash point</b>	Not applicable.
<b>Evaporation rate</b>	No data available
<b>Flammability (solid, gas)</b>	Not applicable.
<b>Vapour pressure</b>	Not applicable.
<b>Vapour density</b>	Not applicable.
<b>Fat Solubility</b>	Not applicable.
<b>Partition coefficient</b>	No data available
<b>Autoignition temperature</b>	Not applicable.
<b>Viscosity</b>	No data available
<b>Explosive properties</b>	Not applicable.
<b>Oxidising properties</b>	Not applicable.
<b>Solubility</b>	Immiscible in water

## 9.2. Other information

<b>Conductivity</b>	No data available
<b>Surface tension</b>	No data available
<b>Specific gravity</b>	2.6 - 2.9 g/cm <sup>3</sup>
<b>Gas group</b>	No data available
<b>Benzene Content</b>	Not applicable.
<b>Lead content</b>	Not applicable.
<b>VOC (Volatile organic compounds)</b>	Not applicable.

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Not applicable.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No Significant Hazard.

### 10.5. Incompatible materials

No Significant Hazard.

### 10.6. Hazardous decomposition products

Hazardous Decomposition Products (silica): Crystalline silica will dissolve in hydrofluoric acid and produce silicone tetrafluoride. Reaction with water or acids generates heat.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

<b>Acute toxicity</b>	Harmful by inhalation.
<b>Skin corrosion/irritation</b>	Prolonged or repeated exposure may cause irritation to skin and mucous membranes.
<b>Serious eye damage/irritation</b>	No irritation expected.

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## 11.1. Information on toxicological effects

Respiratory or skin sensitisation	No sensitization effects reported.
Germ cell mutagenicity	No mutagenic effects reported.
Carcinogenicity	Known Human Carcinogens (Category 1).
Reproductive toxicity	No observed effect level. No observed effect concentration.
STOT-single exposure	No known adverse health effects.
STOT-repeated exposure	<p>Chronic effects</p> <p>Prolonged inhalation of respirable crystalline silica</p> <p>In 1997, the International Agency for Research on Cancer (IARC) concluded that crystalline silica inhaled from occupational sources can cause lung cancer in humans. However it pointed out that not all industrial circumstances, nor all crystalline silica types, were to be incriminated. (IARC Monographs on the evaluation of the carcinogenic risks of chemicals to humans, Silica, silicates dust and organic fibers, 1997, Vol. 68, IARC, Lyon, France). In June 2003, the European Commission's Scientific Committee for Occupational Exposure Limits (SCOEL) concluded:</p> <p>"that the main effect in humans of the inhalation of respirable crystalline silica is silicosis. There is sufficient information to conclude that the relative lung cancer risk is increased in persons with silicosis (and apparently, not in employees without silicosis exposed to silica dust in quarries and in the ceramic industry). Therefore, preventing the onset of silicosis will also reduce the cancer risk. Since a clear threshold for silicosis development cannot be identified, any reduction of exposure will reduce the risk of silicosis."</p> <p>(SCOEL SUM Doc 94-final on respirable crystalline silica, June 2003)</p> <p>There is a body of evidence supporting the fact that increased cancer risk would be limited to people already suffering from silicosis. Worker protection against silicosis should be assured by respecting the existing regulatory occupational exposure limits and implementing additional risk management measures where required (see Section 16).</p>
Aspiration hazard	No Significant Hazard.
Repeated or prolonged exposure	Inhalation may cause coughing, tightness of the chest and irritation of the respiratory system.

## SECTION 12: Ecological information

### 12.1. Toxicity

Not relevant

### 12.2. Persistence and degradability

No data is available on this product.

### 12.3. Bioaccumulative potential

Does not bioaccumulate.

### 12.4. Mobility in soil

Not determined.

### 12.5. Results of PBT and vPvB assessment

Not determined.

### 12.6. Other adverse effects

Not applicable.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Dispose of in compliance with all local and national regulations.

### Disposal methods

Contact a licensed waste disposal company.

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<b>Disposal of packaging</b>	
	Empty containers can be sent for disposal or recycling.

## SECTION 14: Transport information

<b>ADR/RID</b>	
	The product is not classified as dangerous for carriage.

<b>IMDG</b>	
	The product is not classified as dangerous for carriage.

<b>IATA</b>	
	The product is not classified as dangerous for carriage.

<b>Further information</b>	
	The product is not classified as dangerous for carriage.

## SECTION 15: Regulatory information

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

<b>Regulations</b>	<p>U.S. FEDERAL REGULATIONS:            CERCLA 103 Reportable Quantity: Alumino Silicate is not subject to CERCLA reporting requirements. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.            SARA TITLE III:            Hazard Category For Section 311/312: Chronic health            Section 313 Toxic Chemicals: This product contains the following chemicals subject to Annual Release Reporting Requirements Under SARA Title III, Section 313 (40 CFR 372): None            Section 302 Extremely Hazardous Substances (TPQ): None            EPA Toxic Substances Control Act (TSCA) Status: All of the components of this product are listed on the TSCA inventory.            U.S. STATE REGULATIONS            California Proposition 65: This product contains the following substances known to the State of California to cause cancer: Crystalline Silica as Cristobalite.            INTERNATIONAL REGULATIONS:            Canadian Environmental Protection Act: All of the components in this product are listed on the Domestic Substances List (DSL).            Canadian WHMIS Classification: Class D Division 2A (cristobalite)            European Inventory of New and Existing Chemicals Substances (EINECS): All of the components in this product are listed on the EINECS inventory.            Australian Inventory of Chemical Substances: All of the components in this product are listed on the AICS for Australia.            China Inventory of Existing Chemicals and Chemical Substances: All of the components in this product are listed on the IECSC for China.            Japanese Existing and New Chemical Substances: All of the components in this product are listed on the Japanese ENCS list.            Korean Existing Chemicals List: All of the components in this product are listed on the KECL for Korea.            Philippine Inventory of Chemicals and Chemical Substances: All of the components in this product are listed on the PICCS.</p>
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<b>15.2. Chemical safety assessment</b>	
	No data is available on this product.

## SECTION 16: Other information

<b>Other information</b>	
<b>Text of risk phrases in Section 3</b>	R48/20 - Harmful: danger of serious damage to health by prolonged exposure through inhalation.
<b>Text of Hazard Statements in Section 3</b>	STOT RE 1: H372 - Causes damage to organs through prolonged or repeated exposure .

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## Further information

### Training

Workers must be informed of the presence of crystalline silica and trained in the proper use and handling of this product as required under applicable regulations.

The information supplied in this Safety Data Sheet is designed only as guidance for the safe use, storage and handling of the product. This information is correct to the best of our knowledge and belief at the date of publication however no guarantee is made to its accuracy. This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any other process.