



SAFETY DATA SHEET according to the US OSHA Hazard Communication Standard (29 CFR 1910.1200) and the Canadian Hazardous Products Regulations

Section 1: IDENTIFICATION

Product Name: Rokide EZ Flame Spraying Rods
Article Number: 9100194D, 9100194E
Product Use: Preparation of coatings.
Restrictions on Use: Not available.
Manufacturer/Supplier: Saint-Gobain Coating Solutions
One New Bond Street
Worcester, MA 01615-0137
United States
Email: CeramicMaterials@saint-gobain.com
Phone Number: (508) 795-5000
Emergency Phone: **Manufacturer:**
ChemTel 1-800-255-3924; +1 (813)248-0585 (International)
In Country Contact:
Australia: 1-300-954-583
Brazil: 0-800-591-6042
China: 400-120-0751
India: 000-800-100-4086
Mexico: 01-800-099-0731
Date of Preparation of SDS: April 18, 2022

Section 2: HAZARD(S) IDENTIFICATION

GHS INFORMATION

As supplied, this material is unlikely to pose any health hazards and is not hazardous according to OSHA criteria (29 CFR 1910.1200) and WHMIS 2015 criteria.

During intended conditions of use, molten material may generate fumes. The classification below and the information contained in this SDS refer to the hazards posed by the molten material.

Once cooled, the deposited coating is unlikely to pose any health hazards.

Classification: Not hazardous according to OSHA criteria (29 CFR 1910.1200).
Not hazardous according to WHMIS 2015 criteria.

LABEL ELEMENTS

Hazard None.

Pictogram(s):

Signal Word: None.

Hazard Not applicable.
Statements:

Precautionary Statements

Prevention: Not applicable.



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Response: Not applicable.

Storage: Not applicable.

Disposal: Not applicable.

Hazards Not Otherwise Classified: Not applicable.

Ingredients with Unknown Toxicity: 100% of this product mixture consists of ingredient(s) of unknown acute toxicity.

This material is not considered hazardous by the OSHA Hazard Communication Standard, (29 CFR 1910.1200).

This material is not considered hazardous by the Hazardous Products Regulations.

Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient(s)	Common name / Synonyms	CAS No.	% wt./wt.
Zirconium oxide (ZrO ₂)	Zirconium dioxide	1314-23-4	55 - 100
Calcium oxide (CaO)	Not available.	1305-78-8	< 5
Hafnium oxide (HfO ₂)	Not available.	12055-23-1	< 5
Aluminum oxide	Not available.	1344-28-1	< 5
Quartz (SiO ₂)	Not available.	14808-60-7	< 5
Cristobalite (SiO ₂)	Not available.	14464-46-1	< 5

Section 4: FIRST-AID MEASURES

Inhalation: If mist or fumes are inhaled: Call a poison center or doctor if you feel unwell.

Acute and delayed symptoms and effects: Hot mist and fumes may cause respiratory irritation. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain. Inhalation of respirable Quartz from this material is unlikely. Rods as supplied and the cooled deposited material are not likely to cause any adverse effects.

Eye Contact: If in eyes: Rinse cautiously with water for at least 30 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or doctor.

Acute and delayed symptoms and effects: Hot mist and fumes may cause eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision. Hot liquid product may cause serious thermal burns on direct contact. Handling of rods and the cooled deposited material are unlikely to cause any adverse effects on the eyes.

Skin Contact: If on skin (or hair): Rinse skin with water or shower. Get immediate medical attention. Remove non-adhering contaminated clothing. Cool adherent materials and burned areas with ice and/or cold water. Do not remove adherent material or clothing. Wash contaminated clothing before reuse.

Acute and delayed symptoms and effects: Hot mist and fumes may cause skin irritation. Signs/symptoms may include localized redness, swelling,



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and itching. Hot liquid product may cause serious thermal burns on direct contact. Handling of rods and the cooled deposited material are unlikely to cause any adverse effects on the skin.

Ingestion: If molten material is swallowed: Rinse mouth. Immediately call a poison center or doctor. If vomiting occurs naturally, have victim lean forward to reduce the risk of aspiration. Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.

Acute and delayed symptoms and effects: Hot product may cause thermal burns. Causes burns to nose, mouth, throat, and digestive tract. Signs/symptoms may include severe mouth, throat and abdominal pain, nausea, vomiting, and diarrhea, blood in the feces and/or vomitus may also be seen.

General Advice: In case of accident or if you feel unwell, seek medical advice immediately (show the label or SDS where possible).

Note to Physicians: Symptoms may not appear immediately.

Section 5: FIRE-FIGHTING MEASURES

FLAMMABILITY AND EXPLOSION INFORMATION

Not flammable or combustible by OSHA/WHMIS criteria.

Sensitivity to Mechanical Impact: This material is not sensitive to mechanical impact.

Sensitivity to Static Discharge: This material is not sensitive to static discharge.

MEANS OF EXTINCTION

Suitable Extinguishing Media: Small Fire: Dry chemical, CO2, water spray or regular foam.
Large Fire: Water spray, fog or regular foam. Move containers from fire area if you can do it without risk.

Unsuitable Extinguishing Media: Not available.

Products of Combustion: Oxides of zirconium. Oxides of calcium. Oxides of aluminum. Oxides of silica.

Protection of Firefighters: Fire may produce irritating, corrosive and/or toxic gases. Runoff from fire control or dilution water may cause pollution. Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters' protective clothing will only provide limited protection.

Section 6: ACCIDENTAL RELEASE MEASURES

Emergency Procedures: Keep unauthorized personnel away.

Personal Precautions: Use personal protection recommended in Section 8.

Environmental Precautions: Keep out of drains, sewers, ditches, and waterways.

Methods for Containment: If molten material spills, contain hot liquid by dyking and allow to cool and solidify. Do not flush to sewer or allow to enter waterways.



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Methods for Clean-Up: Pick up and place into suitable containers for disposal.

Other Information: Sweep up and shovel into suitable containers for disposal.

Section 7: HANDLING AND STORAGE

Handling:

Do not swallow. Wash hands thoroughly after handling. See Section 8 for information on Personal Protective Equipment.

Storage:

Store away from incompatible materials. See Section 10 for information on Incompatible Materials. Keep out of the reach of children.

Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Component

Zirconium dioxide [CAS No. 1314-23-4]

ACGIH: 5 mg/m³ (TWA); 10 mg/m³ (STEL); A4 (1992); For Zirconium and compounds, as Zr

OSHA: 5 mg/m³ (as Zr) (TWA); For Zirconium compounds

10 mg/m³ (as Zr) (STEL) [Vacated]; For Zirconium compounds

Calcium oxide [CAS No. 1305-78-8]

ACGIH: 2 mg/m³ (TWA); (1990)

OSHA: 5 mg/m³ (TWA);

Hafnium oxide [CAS No. 12055-23-1]

ACGIH: No TLV established.

OSHA: No PEL established.

Aluminum oxide [CAS No. 1344-28-1]

ACGIH: 1 mg/m³ (TWA); A4; Respirable particulate matter (2007); For Aluminum metal and Insoluble compounds

OSHA: 15 mg/m³ (Total dust, as Al) (TWA), 5 mg/m³ (Respirable fraction, as Al) (TWA); For Aluminum metal dust.

Quartz [CAS No. 14808-60-7]

ACGIH: 0.025 mg/m³ (TWA); A2; Respirable particulate matter (2009)

OSHA: 30 / (%SiO₂ + 2) mg/m³ Quartz (Total dust) (TWA), 10 / (%SiO₂ + 2) mg/m³ Quartz (Respirable) & 250 / (%SiO₂ + 5) mppcf Quartz (Respirable) (TWA); See Table Z3. 0.1 mg/m³ (As respirable quartz) (TWA) [Vacated];

Cristobalite [CAS No. 14464-46-1]

ACGIH: 0.025 mg/m³ (TWA); A2; Respirable particulate matter (2009); For Quartz

OSHA: Use ½ the value calculated from the count or mass formulae for quartz.

PEL: Permissible Exposure Limit

TWA: Time-Weighted Average

STEL: Short-Term Exposure Limit

Engineering Controls:

Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapour, gas, etc.) below recommended exposure limits. Use explosion-proof electrical, ventilating,

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and lighting equipment.

PERSONAL PROTECTIVE EQUIPMENT (PPE)



- Eye/Face Protection:** Wear chemical safety goggles. If product is hot, wear full face-shield. Use equipment for eye protection that meets the standards referenced by CSA Standard CAN/CSA-Z94.3:20 and OSHA regulations in 29 CFR 1910.133 for Personal Protective Equipment.
- Hand Protection:** Wear protective gloves. If product is hot, thermally protective gloves are recommended. Consult manufacturer specifications for further information.
- Skin and Body Protection:** Wear protective clothing.
- Respiratory Protection:** If engineering controls and ventilation are not sufficient to control exposure to below the allowable limits then an appropriate NIOSH/MSHA approved air-purifying respirator that meets the requirements of CSA Standard CAN/CSA-Z94.4-18, with organic vapor cartridge, or self-contained breathing apparatus must be used. Supplied air breathing apparatus must be used when oxygen concentrations are low or if airborne concentrations exceed the limits of the air-purifying respirators.
- General Hygiene Considerations:** Handle according to established industrial hygiene and safety practices. Consult a competent industrial hygienist to determine hazard potential and/or the PPE manufacturers to ensure adequate protection.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Solid, white material.
Colour:	White.
Odour:	Odourless.
Odour Threshold:	Not available.
Physical State:	Solid.
pH:	Not available.
Melting Point / Freezing Point:	2300 °C (4172 °F)
Initial Boiling Point:	Not available.
Boiling Range:	Not available.
Flash Point:	Not available.



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Evaporation Rate:	Not available.
Flammability (solid, gas):	See Section 5.
Lower Flammability Limit:	Not available.
Upper Flammability Limit:	Not available.
Vapor Pressure:	Not available.
Vapor Density:	Not available.
Relative Density:	Not available.
Solubilities:	Insoluble in water.
Partition Coefficient: n- Octanol/Water:	Not available.
Auto-ignition Temperature:	Not available.
Decomposition Temperature:	Not available.
Viscosity:	Not available.
Percent Volatile, wt. %:	Not available.
VOC content, wt. %:	Not available.
Density:	Not available.
Coefficient of Water/Oil Distribution:	Not available.

Section 10: STABILITY AND REACTIVITY

Reactivity:	Contact with incompatible materials. Exposure to heat.
Chemical Stability:	Stable under normal storage conditions.
Possibility of Hazardous Reactions:	None known.
Conditions to Avoid:	Contact with incompatible materials. Exposure to heat.
Incompatible Materials:	Strong oxidizers.
Hazardous Decomposition Products:	Not available.

Section 11: TOXICOLOGICAL INFORMATION

EFFECTS OF ACUTE EXPOSURE

Product Toxicity

Oral:	Not available.
Dermal:	Not available.
Inhalation:	Not available.



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Component Toxicity

Component	CAS No.	LD ₅₀ oral	LD ₅₀ dermal	LC ₅₀
Zirconium dioxide	1314-23-4	Not available.	Not available.	Not available.
Calcium oxide	1305-78-8	Not available.	Not available.	Not available.
Hafnium oxide	12055-23-1	Not available.	Not available.	Not available.
Aluminum oxide	1344-28-1	Not available.	Not available.	Not available.
Quartz	14808-60-7	Not available.	Not available.	0.3 mg/m ³ (human); 10Y
Cristobalite	14464-46-1	Not available.	Not available.	Not available.

Likely Routes of Exposure: Skin contact.

Target Organs: Skin. Eyes. Respiratory system.

Symptoms (including delayed and immediate effects)

Inhalation: Hot mist and fumes may cause respiratory irritation. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain. Inhalation of respirable Quartz from this material is unlikely. Rods as supplied and the cooled deposited material are not likely to cause any adverse effects.

Eye: Hot mist and fumes may cause eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision. Hot liquid product may cause serious thermal burns on direct contact. Handling of rods and the cooled deposited material are unlikely to cause any adverse effects on the eyes.

Skin: Hot mist and fumes may cause skin irritation. Signs/symptoms may include localized redness, swelling, and itching. Hot liquid product may cause serious thermal burns on direct contact. Handling of rods and the cooled deposited material are unlikely to cause any adverse effects on the skin.

Ingestion: Hot product may cause thermal burns. Causes burns to nose, mouth, throat, and digestive tract. Signs/symptoms may include severe mouth, throat and abdominal pain, nausea, vomiting, and diarrhea, blood in the feces and/or vomitus may also be seen.

Skin Sensitization: Not available.

Respiratory Sensitization: Not available.

Medical Conditions Aggravated By Exposure: Not available.

EFFECTS OF CHRONIC EXPOSURE (from short and long-term exposure)

Target Organs: Skin. Eyes. Respiratory system. Lungs.

Chronic Effects: Prolonged or repeated contact may dry skin and cause irritation. Repeated exposure to Silica (Quartz, SiO₂) can cause silicosis, a form of lung scarring that can cause shortness of breath, reduced lung function, and in severe cases, death. However, inhalation of respirable Quartz from this material is unlikely.

Carcinogenicity: Product is not classified as a carcinogen. Respirable Silica (Quartz, SiO₂) dust is classified as a human carcinogen. However, inhalation of respirable Quartz from this material is unlikely.



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Component Carcinogenicity

Component	ACGIH	IARC	NTP	OSHA	Prop 65
Quartz	A2	Group 1	List 1	OSHA Carcinogen.	Listed.
Cristobalite	A2	Group 1	List 1	OSHA Carcinogen.	Listed.

Mutagenicity: Not available.

Reproductive Effects: Not available.

Developmental Effects

Teratogenicity: Not available.

Embryotoxicity: Not available.

Toxicologically Synergistic Materials: Not available.

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity: Not available.

Persistence / Degradability: Not available.

Bioaccumulation / Accumulation: Not available.

Mobility in Environment: Not available.

Other Adverse Effects: Not available.

Section 13: DISPOSAL CONSIDERATIONS

Disposal Instructions: Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

Section 14: TRANSPORT INFORMATION

U.S. Department of Transportation (DOT)

Proper Shipping Name: Not regulated.

Class: Not applicable.

UN Number: Not applicable.

Packing Group: Not applicable.

Placard(s): Not applicable.

Canada Transportation of Dangerous Goods (TDG)

Proper Shipping Name: Not regulated.

Class: Not applicable.

UN Number: Not applicable.

Packing Group: Not applicable.

Placard(s): Not applicable.



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Section 15: REGULATORY INFORMATION

Chemical Inventories

US (TSCA)

The components of this product are in compliance with the chemical notification requirements of TSCA.

Canada (DSL)

The components of this product are in compliance with the chemical notification requirements of the NSN Regulations under CEPA, 1999.

Federal Regulations

United States

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

SARA Title III

Component	Section 302 (EHS) TPQ (lbs.)	Section 304 EHS RQ (lbs.)	CERCLA RQ (lbs.)	Section 313	RCRA CODE	CAA 112(r) TQ (lbs.)
Aluminum oxide	Not listed.	Not listed.	Not listed.	313	Not listed.	Not listed.

State Regulations

Massachusetts

US Massachusetts Commonwealth's Right-to-Know Law (Appendix A to 105 Code of Massachusetts Regulations Section 670.000)

Component	CAS No.	RTK List
Zirconium oxide	1314-23-4	Listed.
Calcium oxide	1305-78-8	Listed.
Aluminum oxide	1344-28-1	Listed.
Quartz	14808-60-7	E
Cristobalite	14464-46-1	E

Note: E = Extraordinarily Hazardous Substance

New Jersey

US New Jersey Worker and Community Right-to-Know Act (New Jersey Statute Annotated Section 34:5A-5)

Component	CAS No.	RTK List
Calcium oxide	1305-78-8	SHHS
Aluminum oxide	1344-28-1	Listed.
Quartz	14808-60-7	SHHS
Cristobalite	14464-46-1	SHHS

Note: SHHS = Special Health Hazard Substance

Pennsylvania

US Pennsylvania Worker and Community Right-to-Know Law (34 Pa. Code Chap. 301-323)

Component	CAS No.	RTK List
Calcium oxide	1305-78-8	Listed.



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Aluminum oxide	1344-28-1	E
Quartz	14808-60-7	Listed.
Cristobalite	14464-46-1	Listed.

Note: E = Environmental Hazard

**California
California Prop 65:**



WARNING This product can expose you to Quartz and Cristobalite, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Section 16: OTHER INFORMATION

Disclaimer:

The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for their own particular use.

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