

## Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and OSHA  
GHS

Printing date 18.11.2015

Revision: 18.11.2015

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

- **1.1 Product identifier**
- **Trade name:** Rokide EZ Flame Spraying Rods
- **Article number:** 9100194D, 9100194E
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **Application of the substance / the mixture:** Preparation of coatings
- **1.3 Details of the supplier of the Safety Data Sheet**
- **Manufacturer/Supplier:**  
Saint Gobain Coating Solutions  
One New Bond Street  
Worcester, MA 01615-0137  
(508) 795-5000  
CeramicMaterials@saint-gobain.com
- **1.4 Emergency telephone number:**  
CHEMTREC  
1-800-424-9300 (US/Canada)  
+01 703-527-3887 (International)

### SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**  
The product is not classified as hazardous according to OSHA GHS regulations within the United States.  
The product is not classified as hazardous according to the Globally Harmonized System (GHS).  
The product is not classified as hazardous according to the CLP regulation.
- **Additional information:**  
There are no other hazards not otherwise classified that have been identified.  
0 % of the mixture consists of component(s) of unknown toxicity.

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- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**  
The product is not classified as hazardous according to OSHA GHS regulations within the United States.  
The product is not classified as hazardous according to the CLP regulation.
- **Hazard pictograms** None.
- **Signal word** Not Regulated
- **Hazard statements** Not Regulated
- **Precautionary statements** Not Regulated.
- **Additional information:**  
Safety data sheet available on request.

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- **NFPA ratings (scale 0 - 4)**



- **HMIS-ratings (scale 0 - 4)**



- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

## SECTION 3: Composition/information on ingredients

- **3.2 Mixtures**

- **Description:** Mixture of substances listed below with nonhazardous additions.

- **Dangerous components:**

CAS: 1314-23-4 EINECS: 215-227-2	zirconium dioxide substance with a Community workplace exposure limit	50-100%
CAS: 1305-78-8 EINECS: 215-138-9	calcium oxide ⚠ Eye Dam. 1, H318 ⚠ Skin Irrit. 2, H315; STOT SE 3, H335	< 5%
CAS: 12055-23-1 EINECS: 235-013-2	hafnium dioxide substance with a Community workplace exposure limit	< 5%
CAS: 1344-28-1 EINECS: 215-691-6	aluminium oxide substance with a Community workplace exposure limit	< 5%
CAS: 14808-60-7 EINECS: 238-878-4	Quartz (SiO <sub>2</sub> ) ⚠ Carc. 1A, H350	< 5%
CAS: 14464-46-1 EINECS: 238-455-4	cristobalite ⚠ Carc. 1A, H350; STOT RE 2, H373	< 5%

- **Additional information:**

Non-classification as a carcinogen is based on non-respirable form of product.  
For the listed ingredient(s), the identity and exact percentages are being withheld as a trade secret.  
There is no exposure to hazardous ingredients during normal use.

## SECTION 4: First aid measures

- **4.1 Description of first aid measures**

- **General information:** Adverse health effects are not reasonably expected from normal use of product.
- **After inhalation:**  
Unlikely route of exposure.

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- Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:**  
Remove contact lenses if worn, if possible.  
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:**  
Unlikely route of exposure.  
Do not induce vomiting; call for medical help immediately.
- **4.2 Most important symptoms and effects, both acute and delayed**  
Adverse health effects are not reasonably expected from normal use of product.
- **Hazards** No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**  
No special measures required.

## SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**  
The product is not flammable.  
Use fire extinguishing methods suitable to surrounding conditions.
- **For safety reasons unsuitable extinguishing agents:** None.
- **5.2 Special hazards arising from the substance or mixture**  
Formation of toxic gases is possible during heating or in case of fire.
- **5.3 Advice for firefighters**
- **Protective equipment:**  
Wear self-contained respiratory protective device.  
Wear fully protective suit.
- **Additional information** No further relevant information available.

## SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Ensure adequate ventilation  
Avoid formation of dust.  
Do not breathe dust.
- **6.2 Environmental precautions:** Avoid release to the environment.
- **6.3 Methods and material for containment and cleaning up:**  
Pick up mechanically.  
Dispose contaminated material as waste according to section 13.  
Send for recovery or disposal in suitable receptacles.
- **6.4 Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

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## SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**  
Use only in well ventilated areas.  
Prevent formation of dust.  
Any unavoidable deposit of dust must be regularly removed.  
Use proper precautions around molten material.
- **Information about fire - and explosion protection:** No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Store away from foodstuffs.
- **Further information about storage conditions:** None.
- **7.3 Specific end use(s)** No further relevant information available.

## SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see section 7.
- **8.1 Control parameters**

### Ingredients with limit values that require monitoring at the workplace:

#### 1314-23-4 zirconium dioxide

PEL (USA)	Long-term value: 5 mg/m <sup>3</sup> as Zr
REL (USA)	Short-term value: 10 mg/m <sup>3</sup> Long-term value: 5 mg/m <sup>3</sup> as Zr
TLV (USA)	Short-term value: 10 mg/m <sup>3</sup> Long-term value: 5 mg/m <sup>3</sup> as Zr
EL (Canada)	Short-term value: 10 mg/m <sup>3</sup> Long-term value: 5 mg/m <sup>3</sup> as Zr

#### 1305-78-8 calcium oxide

PEL (USA)	Long-term value: 5 mg/m <sup>3</sup>
REL (USA)	Long-term value: 2 mg/m <sup>3</sup>
TLV (USA)	Long-term value: 2 mg/m <sup>3</sup>
EL (Canada)	Long-term value: 2 mg/m <sup>3</sup>
EV (Canada)	Long-term value: 2 mg/m <sup>3</sup>

#### 12055-23-1 hafnium dioxide

PEL (USA)	Long-term value: 0,5 mg/m <sup>3</sup> as Hf
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REL (USA)	Long-term value: 0,5 mg/m <sup>3</sup> as Hf
TLV (USA)	Long-term value: 0,5 mg/m <sup>3</sup> as Hf
EL (Canada)	Long-term value: 0,5 mg/m <sup>3</sup> as Hf

**1344-28-1 aluminium oxide**

PEL (USA)	Long-term value: 15*; 15** mg/m <sup>3</sup> *Total dust; ** Respirable fraction
REL (USA)	Long-term value: 10* 5** mg/m <sup>3</sup> as Al*Total dust**Respirable/pyro powd./welding f.
TLV (USA)	Long-term value: 1* mg/m <sup>3</sup> as Al; *as respirable fraction
EL (Canada)	Long-term value: 1,0 mg/m <sup>3</sup> respirable, as Al
EV (Canada)	Long-term value: 10 mg/m <sup>3</sup> total dust

**14808-60-7 Quartz (SiO<sub>2</sub>)**

PEL (USA)	see Quartz listing
REL (USA)	Long-term value: 0,05* mg/m <sup>3</sup> *respirable dust; See Pocket Guide App. A
TLV (USA)	Long-term value: 0,025* mg/m <sup>3</sup> *as respirable fraction
EL (Canada)	Long-term value: 0,025 mg/m <sup>3</sup> ACGIH A2; IARC 1
EV (Canada)	Long-term value: 0,10* mg/m <sup>3</sup> *respirable fraction

**14464-46-1 cristobalite**

PEL (USA)	½ value from respirable dust formulae for Quartz
REL (USA)	Long-term value: 0,05* mg/m <sup>3</sup> *respirable dust; See Pocket Guide App. A
TLV (USA)	Long-term value: 0,025* mg/m <sup>3</sup> *as respirable fraction
EL (Canada)	Long-term value: 0,025 mg/m <sup>3</sup> ACGIH A2; IARC 1
EV (Canada)	Long-term value: 0,05* mg/m <sup>3</sup> *respirable fraction

- **DNELs** No further relevant information available.
- **PNECs** No further relevant information available.

· **8.2 Exposure controls**· **Personal protective equipment:**· **General protective and hygienic measures:**

The usual precautionary measures are to be adhered to when handling chemicals.

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Keep away from foodstuffs, beverages and feed.  
Wash hands before breaks and at the end of work.  
Avoid close or long term contact with the skin.  
Avoid contact with the eyes.  
Avoid contact with the liquefied material.  
Do not breathe dust.

· **Respiratory protection:**

Not required under normal conditions of use.  
Use respiratory protection when grinding or cutting material.  
For spills, respiratory protection may be advisable.  
Particulate mask should filter at least 99% of airborne particles.

· **Protection of hands:**

Wear gloves for the protection against mechanical hazards according to NIOSH or EN 388.

· **Eye protection:**



Safety glasses

· **Body protection:**

Not required under normal conditions of use.  
Protection may be required for spills.

· **Limitation and supervision of exposure into the environment** Avoid release to the environment.

· **Risk management measures** See Section 7 for additional information.

## SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

· <b>Form:</b>	Solid material
· <b>Colour:</b>	White
· <b>Odour:</b>	Odourless
· <b>Odour threshold:</b>	Not determined.

· **pH-value:** Not applicable.

· **Change in condition**

· <b>Melting point/Melting range:</b>	2300 °C (4172 °F)
· <b>Boiling point/Boiling range:</b>	Not determined.

· **Flash point:** Not applicable.

· **Flammability (solid, gaseous):** Not determined.

· **Auto/Self-ignition temperature:** Not determined.

· **Decomposition temperature:** Not determined.

· **Self-igniting:** Product is not self-igniting.

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· <b>Danger of explosion:</b>	Product does not present an explosion hazard.
· <b>Explosion limits:</b>	
Lower:	Not determined.
Upper:	Not determined.
· <b>Oxidising properties</b>	Non-oxidising.
· <b>Vapour pressure:</b>	Not determined.
· <b>Density:</b>	Not determined.
· <b>Relative density</b>	Not determined.
· <b>Vapour density</b>	Not applicable.
· <b>Evaporation rate</b>	Not applicable.
· <b>Solubility in / Miscibility with water:</b>	Insoluble.
· <b>Partition coefficient (n-octanol/water):</b>	Not determined.
· <b>Viscosity:</b>	
Dynamic:	Not applicable.
Kinematic:	Not applicable.
· <b>9.2 Other information</b>	No further relevant information available.

## SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used and stored according to specifications.
- **10.3 Possibility of hazardous reactions**  
As the product is supplied it is not capable of dust explosion; however enrichment with fine dust causes risk of dust explosion.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** Toxic metal oxide smoke

## SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.
- **LD/LC50 values relevant for classification:** None.
- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **Acute effects (acute toxicity, irritation and corrosivity):** From product as supplied: None.

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- **Repeated dose toxicity:**  
Contains known or suspect carcinogens when inhaled. Product is in non-inhalable form and is nonclassifiable as a carcinogen.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction):**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

## SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability**  
Inorganic product, is not eliminable from water by means of biological cleaning processes.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:** Avoid release to the environment.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

## SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**  
Contact waste processors for recycling information.  
The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

## SECTION 14: Transport information

- |  |               |
|--|---------------|
| <ul style="list-style-type: none"> <li>· <b>14.1 UN-Number</b></li> <li>· <b>DOT, ADR, IMDG, IATA</b></li> </ul>               | Not Regulated |
| <ul style="list-style-type: none"> <li>· <b>14.2 UN proper shipping name</b></li> <li>· <b>DOT, ADR, IMDG, IATA</b></li> </ul> | Not Regulated |

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- |  |                 |
|--|-----------------|
| <b>· 14.3 Transport hazard class(es)</b>   |                 |
| <b>· DOT, ADR, IMDG, IATA</b>  |                 |
| <b>· Class</b>   | Not Regulated   |
| <b>· 14.4 Packing group</b>  |                 |
| <b>· DOT, ADR, IMDG, IATA</b>  | Not Regulated   |
| <b>· 14.5 Environmental hazards:</b>   | Not applicable. |
| <b>· 14.6 Special precautions for user</b>                                       | Not applicable. |
| <b>· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code</b> | Not applicable. |
| <b>· UN "Model Regulation":</b>  | Not Regulated   |

## SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **United States (USA)**
- **SARA**

**· Section 355 (extremely hazardous substances):**

None of the ingredients are listed.

**· Section 313 (Specific toxic chemical listings):**

1344-28-1 | aluminium oxide

**· TSCA (Toxic Substances Control Act):**

All ingredients are listed.

**· Proposition 65 (California):**

**· Chemicals known to cause cancer:**

References to chemical components listed below are based on unbound respirable particles and are not generally applicable to product as supplied.

14808-60-7 | Quartz (SiO<sub>2</sub>)

14464-46-1 | cristobalite

**· Chemicals known to cause reproductive toxicity for females:**

None of the ingredients are listed.

**· Chemicals known to cause reproductive toxicity for males:**

None of the ingredients are listed.

**· Chemicals known to cause developmental toxicity:**

None of the ingredients are listed.

**· Carcinogenic Categories**

**· EPA (Environmental Protection Agency)**

None of the ingredients are listed.

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· **IARC (International Agency for Research on Cancer)**

14808-60-7	Quartz (SiO <sub>2</sub> )	1
14464-46-1	crystalite	1

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

14808-60-7	Quartz (SiO <sub>2</sub> )	
14464-46-1	crystalite	

· **Canada**

· **Canadian Domestic Substances List (DSL)**

All ingredients are listed.

· **Canadian Ingredient Disclosure list (limit 0.1%)**

None of the ingredients are listed.

· **Canadian Ingredient Disclosure list (limit 1%)**

1305-78-8	calcium oxide	
1344-28-1	aluminium oxide	
14808-60-7	Quartz (SiO <sub>2</sub> )	
14464-46-1	crystalite	

· **Directive 2012/18/EU**

· **Named dangerous substances - ANNEX I**

None of the ingredients are listed.

· **Other regulations, limitations and prohibitive regulations**

· **Substances of very high concern (SVHC) according to REACH, Article 57**

None of the ingredients are listed.

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**

- H315 Causes skin irritation.
- H318 Causes serious eye damage.
- H335 May cause respiratory irritation.
- H350 May cause cancer.
- H373 May cause damage to organs through prolonged or repeated exposure.

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)  
 IMDG: International Maritime Code for Dangerous Goods  
 DOT: US Department of Transportation  
 IATA: International Air Transport Association  
 GHS: Globally Harmonised System of Classification and Labelling of Chemicals  
 ACGIH: American Conference of Governmental Industrial Hygienists

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EINECS: European Inventory of Existing Commercial Chemical Substances  
ELINCS: European List of Notified Chemical Substances  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
NFPA: National Fire Protection Association (USA)  
HMIS: Hazardous Materials Identification System (USA)  
DNEL: Derived No-Effect Level (REACH)  
PNEC: Predicted No-Effect Concentration (REACH)  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent  
PBT: Persistent, Bioaccumulative and Toxic  
SVHC: Substances of Very High Concern  
vPvB: very Persistent and very Bioaccumulative  
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2  
Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1  
Carc. 1A: Carcinogenicity, Hazard Category 1A  
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3  
STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2

**Sources**

Website, European Chemicals Agency ([http://http://echa.europa.eu/](http://echa.europa.eu/))  
Website, US EPA Substance Registry Services ([http://http://ofmpub.epa.gov/sor\\_internet/registry/substreg/home/overview/home.do](http://ofmpub.epa.gov/sor_internet/registry/substreg/home/overview/home.do))  
Website, Chemical Abstracts Registry, American Chemical Society (<https://www.cas.org>)  
Patty's Industrial Hygiene, 6th ed., Rose, Vernon, ed. ISBN: 978-0-470-07488-6  
Casarett and Doull's Toxicology: The Basic Science of Poisons, 8th Ed., Klaasen, Curtis D., ed., ISBN: 978-0-07-176923-5.  
Safety Data Sheets, Individual Manufacturers  
SDS Prepared by:  
ChemTel Inc.  
1305 North Florida Avenue  
Tampa, Florida USA 33602-2902  
Toll Free North America 1-888-255-3924 Intl. +01 813-248-0573  
Website: [www.chemtelinc.com](http://www.chemtelinc.com)