

Safety Data Sheet

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

Printing date: 12 July 2018

Revision: 12 July 2018

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

· Application of the substance / the mixture: Preparation of coatings

· Uses advised against: No further relevant information available.

· 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:

(800)255-3924 (North America)
+1 (813)248-0585 (International)
1-300-954-583 (Australia)
0-800-591-6042 (Brazil)
400-120-0751 (China)
000-800-100-4086 (India)
01-800-099-0731 (Mexico)

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.

· 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.

· NFPA ratings (scale 0 - 4)

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· **HMIS-ratings (scale 0 - 4)**



- **2.3 Other hazards** There are no other hazards not otherwise classified that have been identified.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

· **3.2 Mixtures**

· **Components:**

CAS: 1314-23-4 EINECS: 215-227-2 Reg.nr.: 01-2119486976-14-XXXX	zirconium oxide substance with a Community workplace exposure limit	50-100%
CAS: 1305-78-8 EINECS: 215-138-9 Reg.nr.: 01-2119862019-36-XXXX	Calcium oxide Eye Dam. 1, H318 Skin Irrit. 2, H315; STOT SE 3, H335	< 5%
CAS: 12055-23-1 EINECS: 235-013-2 Reg.nr.: 01-2119967820-31-XXXX	hafnium dioxide substance with a Community workplace exposure limit	< 5%
CAS: 1344-28-1 EINECS: 215-691-6 Reg.nr.: 01-2119529248-35-XXXX	Aluminium oxide substance with a Community workplace exposure limit	< 5%
CAS: 14808-60-7 EINECS: 238-878-4	Quartz (SiO ₂) Carc. 1A, H350i	< 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/or 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.
- **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.

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.
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.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**

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- 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**
- **Requirements to be met by storerooms and receptacles:**
Storage area should be dry and well-ventilated.
- **Information about storage in one common storage facility:** Store away from foodstuffs.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

· 8.1 Control parameters

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

1314-23-4 zirconium oxide

EL (Canada)	Short-term value: 10 mg/m ³ Long-term value: 5 mg/m ³ as Zr
WEL (Great Britain)	Short-term value: 10 mg/m ³ Long-term value: 5 mg/m ³ as Zr
OEL (Ireland)	Short-term value: 10 mg/m ³ Long-term value: 5 mg/m ³ as Zr
PEL (USA)	Long-term value: 5 mg/m ³ as Zr
REL (USA)	Short-term value: 10 mg/m ³ Long-term value: 5 mg/m ³ as Zr
TLV (USA)	Short-term value: 10 mg/m ³ Long-term value: 5 mg/m ³ as Zr

1305-78-8 Calcium oxide

IOELV (EU)	Short-term value: 4 mg/m ³ Long-term value: 1 mg/m ³ Respirable fraction
EL (Canada)	Long-term value: 2 mg/m ³
EV (Canada)	Long-term value: 2 mg/m ³
WEL (Great Britain)	Long-term value: 2 mg/m ³
OEL (Ireland)	Long-term value: 2 mg/m ³
PEL (USA)	Long-term value: 5 mg/m ³
REL (USA)	Long-term value: 2 mg/m ³
TLV (USA)	Long-term value: 2 mg/m ³

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12055-23-1 hafnium dioxide

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

1344-28-1 Aluminium oxide

EL (Canada)	Long-term value: 1,0 mg/m ³ respirable, as Al
EV (Canada)	Long-term value: 10 mg/m ³ total dust
WEL (Great Britain)	Long-term value: 10* 4** mg/m ³ *inhalable dust **respirable dust
OEL (Ireland)	Long-term value: 10* 4** mg/m ³ *total inhalable **respirable dust
PEL (USA)	Long-term value: 15*; 5** mg/m ³ *Total dust; ** Respirable fraction
REL (USA)	Long-term value: 10* 5** mg/m ³ as Al*Total dust**Respirable/pyro powd./welding f.
TLV (USA)	Long-term value: 1* mg/m ³ as Al; *as respirable fraction

14808-60-7 Quartz (SiO₂)

BOELV (EU)	Long-term value: 0,1* mg/m ³ *respirable fraction
EL (Canada)	Long-term value: 0,025 mg/m ³ ACGIH A2; IARC 1
EV (Canada)	Long-term value: 0,10* mg/m ³ *respirable fraction
WEL (Great Britain)	Long-term value: 0,1 mg/m ³ respirable dust, averaged over 8 hours
OEL (Ireland)	Long-term value: 0,1 mg/m ³
PEL (USA)	Long-term value: 0,05* mg/m ³ *resp. dust; 30mg/m ³ /%SiO ₂ +2
REL (USA)	Long-term value: 0,05* mg/m ³ *respirable dust; See Pocket Guide App. A
TLV (USA)	Long-term value: 0,025* mg/m ³ *as respirable fraction

14464-46-1 Cristobalite

EL (Canada)	Long-term value: 0,025 mg/m ³ respirable, ACGIH A2; IARC 1
EV (Canada)	Long-term value: 0,05* mg/m ³

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OEL (Ireland) PEL (USA) REL (USA) TLV (USA)	*respirable fraction Long-term value: 0,1 mg/m ³ Long-term value: 0,05* mg/m ³ *resp. dust; ½ value from resp.dust formulae Quartz Long-term value: 0,05* mg/m ³ *respirable dust; See Pocket Guide App. A Long-term value: 0,025* mg/m ³ *as respirable fraction
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8.2 Exposure controls

General protective and hygienic measures:

- The usual precautionary measures are to be adhered to when handling chemicals.
- 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: No further relevant information available.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

- Form:** Solid material
- Colour:** White
- Odour:** Odourless
- Odour threshold:** Not determined.

- pH-value:** Not applicable.
- Melting point/freezing point:** 2300 °C (4.172 °F)

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· Initial boiling point and boiling range:	Not determined.
· Flash point:	Not applicable.
· Flammability (solid, gas):	Not determined.
· Auto/Self-ignition temperature:	Not determined.
· Decomposition temperature:	Not determined.
· Explosive properties:	Product does not present an explosion hazard.
· Explosion limits	
Lower:	Not determined.
Upper:	Not determined.
· Oxidising properties	Non-oxidising.
· Vapour pressure:	Not determined.
· Density:	
Relative density:	Not determined.
Vapour density:	Not applicable.
Evaporation rate:	Not applicable.
· Solubility in / Miscibility with water:	Insoluble.
· Partition coefficient: n-octanol/water:	Not determined.
· Viscosity	
Dynamic:	Not applicable.
Kinematic:	Not applicable.
· 9.2 Other information	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** No dangerous reactions known.
- **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.

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- **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.
- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer):**

14808-60-7	Quartz (SiO ₂)	1
14464-46-1	Cristobalite	1

- **Probable routes of exposure:**
Ingestion.
Eye contact.
Skin contact.
- **Germ cell mutagenicity:** Based on available data, the classification criteria are not met.
- **Carcinogenicity:**
Contains known or suspect carcinogens when inhaled. Product is in non-inhalable form and is nonclassifiable as a carcinogen.
- **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.

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- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

- **14.1 UN-Number**
- DOT, ADR, IMDG, IATA Not Regulated

- **14.2 UN proper shipping name**
- DOT, ADR, IMDG, IATA Not Regulated

- **14.3 Transport hazard class(es)**
- DOT, ADR, IMDG, IATA
- Class Not Regulated

- **14.4 Packing group**
- DOT, ADR, IMDG, IATA Not Regulated

- **14.5 Environmental hazards:**
- Marine pollutant: No

- **14.6 Special precautions for user** Not applicable.

- **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code** Not applicable.

SECTION 15: Regulatory information

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

- **Section 302 (extremely hazardous substances):**

None of the ingredients are listed.

- **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:**

Reference to chemical component(s) listed below are based on unbound respirable particles and are not generally applicable to product as supplied.

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14808-60-7	Quartz (SiO ₂)	
14464-46-1	Cristobalite	
· Chemicals known to cause developmental toxicity for females:		
None of the ingredients are listed.		
· Chemicals known to cause developmental toxicity for males:		
None of the ingredients are listed.		
· Chemicals known to cause developmental toxicity:		
None of the ingredients are listed.		
· EPA (Environmental Protection Agency)		
None of the ingredients are listed.		
· IARC (International Agency for Research on Cancer)		
14808-60-7	Quartz (SiO ₂)	1
14464-46-1	Cristobalite	1
· Canadian Domestic Substances List (DSL) (Substances not listed)		
All 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. Route of exposure: Inhalation.
H350i May cause cancer by inhalation. Route of exposure: Inhalation.
H373 May cause damage to organs through prolonged or repeated exposure.

· Abbreviations and acronyms:

ADR: 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
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)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bio-accumulable, Toxic

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SVHC: Substances of Very High Concern
vPvB: very Persistent and very Bioaccumulative
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Carc. 1A: Carcinogenicity – Category 1A
Carc. 1A: Carcinogenicity – Category 1Ai
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

Sources

Website, European Chemicals Agency (echa.europa.eu)
Website, US EPA Substance Registry Services (ofmpub.epa.gov/sor_internet/registry/substreg/home/overview/home.do)
Website, Chemical Abstracts Registry, American Chemical Society (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., Klaassen, Curtis D., ed., ISBN: 978-0-07-176923-5.
Safety Data Sheets, Individual Manufacturers

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