

### SECTION 1: Identification

#### 1.1. Identification

Product form : Mixture  
 Trade name : Reno ElectroCast™ 316 SiC  
 Product code : 194520

#### 1.2. Recommended use and restrictions on use

Recommended use : Refractory Applications

#### 1.3. Supplier

Reno Refractories, Inc.  
 601 Reno Drive  
 P.O. Box 201  
 Morris, AL 35116 - United States  
 T 205-647-0240 - F 205-647-6854  
[sales@r-ref.com](mailto:sales@r-ref.com) - [www.renorefractions.com](http://www.renorefractions.com)

#### 1.4. Emergency telephone number

Emergency number : 1-800-262-8200 CHEMTREC

### SECTION 2: Hazard(s) identification

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

##### GHS US classification

Carcinogenicity Category 1A May cause cancer

#### 2.2. GHS Label elements, including precautionary statements

##### GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) : Danger

Hazard statements (GHS US) : May cause cancer

Precautionary statements (GHS US) : Obtain special instructions before use.  
 Do not handle until all safety precautions have been read and understood.  
 Wear protective gloves/protective clothing/eye protection/face protection.  
 If exposed or concerned: Get medical advice/attention.  
 Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

#### 2.3. Other hazards which do not result in classification

No additional information available

#### 2.4. Unknown acute toxicity (GHS US)

Not applicable

### SECTION 3: Composition/Information on ingredients

#### 3.1. Substances

Not applicable

#### 3.2. Mixtures

Name	Product identifier	%	GHS US classification
Silicon carbide	(CAS-No.) 409-21-2	10.55 – 17.88	Carc. 1B, H350
Titanium dioxide	(CAS-No.) 13463-67-7	1.1 – 3.05175	Carc. 2, H351
Crystalline silica	(CAS-No.) 14808-60-7	≤ 0.3	Carc. 1A, H350 STOT RE 1, H372

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Full text of hazard classes and H-statements : see section 16

### SECTION 4: First-aid measures

#### 4.1. Description of first aid measures

- |                                       |  |
|---------------------------------------|--|
| First-aid measures general            | : IF exposed or concerned: Get medical advice/attention.         |
| First-aid measures after inhalation   | : Remove person to fresh air and keep comfortable for breathing. |
| First-aid measures after skin contact | : Wash skin with plenty of water.                                |
| First-aid measures after eye contact  | : Rinse eyes with water as a precaution.                         |
| First-aid measures after ingestion    | : Call a poison center/doctor/physician if you feel unwell.      |

#### 4.2. Most important symptoms and effects (acute and delayed)

#### 4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

### SECTION 5: Fire-fighting measures

#### 5.1. Suitable (and unsuitable) extinguishing media

- |                              |                                  |
|------------------------------|----------------------------------|
| Suitable extinguishing media | : Water spray. Dry powder. Foam. |
|------------------------------|----------------------------------|

#### 5.2. Specific hazards arising from the chemical

- |  |                                |
|--|--------------------------------|
| Hazardous decomposition products in case of fire | : Toxic fumes may be released. |
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#### 5.3. Special protective equipment and precautions for fire-fighters

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|--------------------------------|--|
| Protection during firefighting | : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing. |
|--------------------------------|--|

### SECTION 6: Accidental release measures

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

##### 6.1.1. For non-emergency personnel

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|----------------------|---|
| Emergency procedures | : Only qualified personnel equipped with suitable protective equipment may intervene. |
|----------------------|---|

##### 6.1.2. For emergency responders

- |                      |   |
|----------------------|---|
| Protective equipment | : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection". |
|----------------------|---|

#### 6.2. Environmental precautions

Avoid release to the environment. Notify authorities if product enters sewers or public waters.

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

- |                         |   |
|-------------------------|---|
| Methods for cleaning up | : Mechanically recover the product. Notify authorities if product enters sewers or public waters. |
| Other information       | : Dispose of materials or solid residues at an authorized site.                                   |

#### 6.4. Reference to other sections

For further information refer to section 13.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

- |                               |   |
|-------------------------------|---|
| Precautions for safe handling | : Ensure good ventilation of the work station. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Take all necessary technical measures to avoid or minimize the release of the product on the workplace. Limit quantities of product at the minimum necessary for handling and limit the number of exposed workers. Provide local exhaust or general room ventilation. Wear personal protective equipment. Floors, walls and other surfaces in the hazard area must be cleaned regularly. |
| Hygiene measures              | : Separate working clothes from town clothes. Launder separately. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.   |

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

- |                    |  |
|--------------------|--|
| Storage conditions | : Store in a well-ventilated place. Keep cool. |
|--------------------|--|

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### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

<b>Reno ElectroCast™ 316 SiC</b>	
No additional information available	
<b>Titanium dioxide (13463-67-7)</b>	
<b>USA - ACGIH - Occupational Exposure Limits</b>	
Local name	Titanium dioxide
ACGIH TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
Remark (ACGIH)	TLV® Basis: LRT irr. Notations: A4 (Not classifiable as a Human Carcinogen)
Regulatory reference	ACGIH 2020
<b>USA - OSHA - Occupational Exposure Limits</b>	
Local name	Titanium dioxide (Total dust)
OSHA PEL (TWA) (mg/m <sup>3</sup> )	15 mg/m <sup>3</sup>
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1
<b>Silicon carbide (409-21-2)</b>	
<b>USA - ACGIH - Occupational Exposure Limits</b>	
Local name	Silicon carbide
ACGIH TWA (mg/m <sup>3</sup> )	3 mg/m <sup>3</sup> (Respirable fraction. The value is for particulate matter containing no asbestos and < 1% crystalline silica) 0.1 fibers/cm <sup>3</sup> (Respirable fibers: length > 5 µm; aspect ratio ≥ 3:1, as determined by the membrane filter method at 400-450X magnification (4-mm objective), using phase-contrast illumination) 10 mg/m <sup>3</sup> (Inhalable fraction. The value is for particulate matter containing no asbestos and < 1% crystalline silica)
Remark (ACGIH)	Non fibrous = TLV® Basis: URT irr Fibrous (including whiskers) = TLV® Basis: Mesothelioma; cancer. Notations: A2 (Suspected Human Carcinogen)
Regulatory reference	ACGIH 2020
<b>USA - OSHA - Occupational Exposure Limits</b>	
Local name	Silicon carbide
OSHA PEL (TWA) (mg/m <sup>3</sup> )	15 mg/m <sup>3</sup> (Total dust) 5 mg/m <sup>3</sup> (Respirable fraction)
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1
<b>Crystalline silica (14808-60-7)</b>	
<b>USA - ACGIH - Occupational Exposure Limits</b>	
Local name	Silica crystalline - quartz
ACGIH TWA (mg/m <sup>3</sup> )	0.025 mg/m <sup>3</sup> (Respirable fraction)
Remark (ACGIH)	TLV® Basis: Pulm fibrosis; lung cancer. Notations: A2 (Suspected Human Carcinogen)
Regulatory reference	ACGIH 2020
<b>USA - OSHA - Occupational Exposure Limits</b>	
Local name	Quartz (Respirable) (Silica: Crystalline)
Remark (OSHA)	Table Z-3. For OSHA PEL (TWA): Use formulas: (250 / (%SiO <sub>2</sub> +5)) for mppcf and (10 mg/m <sup>3</sup> / (%SiO <sub>2</sub> +2)) for mg/m <sup>3</sup> . CAS No. source: eCFR Table Z-1.
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-3 Mineral Dusts

#### 8.2. Appropriate engineering controls

- Appropriate engineering controls : Ensure good ventilation of the work station.  
Environmental exposure controls : Avoid release to the environment.

#### 8.3. Individual protection measures/Personal protective equipment

##### Hand protection:

Protective gloves

##### Eye protection:

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Safety glasses

**Skin and body protection:**

Wear suitable protective clothing

**Respiratory protection:**

Wear respiratory protection.

**Personal protective equipment symbol(s):**



## SECTION 9: Physical and chemical properties

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

Physical state	: Solid
Color	: Grey
Odor	: Almost odourless
Odor threshold	: No data available
pH	: No data available
Melting point	: No data available
Freezing point	: Not applicable
Boiling point	: No data available
Flash point	: Not applicable
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Non flammable.
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: No data available
Solubility	: No data available
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: Not applicable
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: Not applicable
Explosive properties	: No data available
Oxidizing properties	: No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

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### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified  
Acute toxicity (dermal) : Not classified  
Acute toxicity (inhalation) : Not classified

Titanium dioxide (13463-67-7)	
LD50 oral rat	> 5000 mg/kg body weight (OECD 425: Acute Oral Toxicity: Up-and-Down Procedure, Rat, Female, Experimental value, Oral, 14 day(s))
LC50 Inhalation - Rat	> 6.82 mg/l (Other, 4 h, Rat, Male, Experimental value, Inhalation (dust), 14 day(s))

Silicon carbide (409-21-2)	
LD50 oral rat	> 2000 mg/kg body weight (OECD 423: Acute Oral Toxicity – Acute Toxic Class Method, Rat, Female, Experimental value, Oral)
LD50 dermal rat	> 2000 mg/kg body weight (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Male / female, Experimental value, Dermal)

Skin corrosion/irritation : Not classified  
Serious eye damage/irritation : Not classified  
Respiratory or skin sensitization : Not classified  
Germ cell mutagenicity : Not classified  
Carcinogenicity : May cause cancer.

Titanium dioxide (13463-67-7)	
IARC group	2B - Possibly carcinogenic to humans

Silicon carbide (409-21-2)	
IARC group	2A - Probably carcinogenic to humans

Crystalline silica (14808-60-7)	
IARC group	1 - Carcinogenic to humans

Reproductive toxicity : Not classified

STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

Crystalline silica (14808-60-7)	
STOT-repeated exposure	Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard : Not classified  
Viscosity, kinematic : No data available

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

Titanium dioxide (13463-67-7)	
LC50 fish 1	> 100 mg/l (Equivalent or similar to OECD 203, 96 h, Oncorhynchus mykiss, Static system, Fresh water, Experimental value, Nominal concentration)
ErC50 (algae)	61 mg/l (EPA 600/9-78-018, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, Nominal concentration)

### 12.2. Persistence and degradability

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<b>Titanium dioxide (13463-67-7)</b>	
Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable (inorganic)
ThOD	Not applicable (inorganic)
<b>Silicon carbide (409-21-2)</b>	
Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable
<b>Crystalline silica (14808-60-7)</b>	
Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable (inorganic)
ThOD	Not applicable (inorganic)

### 12.3. Bioaccumulative potential

<b>Titanium dioxide (13463-67-7)</b>	
Bioaccumulative potential	Not bioaccumulative.
<b>Silicon carbide (409-21-2)</b>	
Bioaccumulative potential	Bioaccumulation: not applicable.
<b>Crystalline silica (14808-60-7)</b>	
Bioaccumulative potential	No bioaccumulation data available.

### 12.4. Mobility in soil

<b>Titanium dioxide (13463-67-7)</b>	
Ecology - soil	Low potential for mobility in soil.
<b>Crystalline silica (14808-60-7)</b>	
Ecology - soil	No (test)data on mobility of the substance available.

### 12.5. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

## SECTION 14: Transport information

### Department of Transportation (DOT)

In accordance with DOT

Not applicable

### Transportation of Dangerous Goods

Not applicable

### Transport by sea

Not applicable

### Air transport

Not applicable

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### SECTION 15: Regulatory information

#### 15.1. US Federal regulations

**Titanium dioxide (13463-67-7)**

Listed on the United States TSCA (Toxic Substances Control Act) inventory

**Silicon carbide (409-21-2)**

Listed on the United States TSCA (Toxic Substances Control Act) inventory

**Crystalline silica (14808-60-7)**

Listed on the United States TSCA (Toxic Substances Control Act) inventory

#### 15.2. International regulations

##### CANADA

**Titanium dioxide (13463-67-7)**

Listed on the Canadian DSL (Domestic Substances List)

**Silicon carbide (409-21-2)**

Listed on the Canadian DSL (Domestic Substances List)

**Crystalline silica (14808-60-7)**

Listed on the Canadian DSL (Domestic Substances List)

##### EU-Regulations

No additional information available

##### National regulations

**Titanium dioxide (13463-67-7)**

Listed on IARC (International Agency for Research on Cancer)

**Silicon carbide (409-21-2)**

Listed on IARC (International Agency for Research on Cancer)

**Crystalline silica (14808-60-7)**

Listed on IARC (International Agency for Research on Cancer)

#### 15.3. US State regulations

Component	State or local regulations
Titanium dioxide(13463-67-7)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List
Silicon carbide(409-21-2)	U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List
Crystalline silica(14808-60-7)	U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List

### SECTION 16: Other information

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Revision date : 02/10/2021

Full text of H-phrases:

H350	May cause cancer
H351	Suspected of causing cancer
H372	Causes damage to organs through prolonged or repeated exposure

SDS US (GHS HazCom 2012)

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