

Safety Data Sheet according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 09/25/2019

| SECTION 1: Identification                                      |   |
|--|---|
| 1.1. Identification  |   |
| Product form   | : Mixture   |
| Trade name   | : Reno Cast 50 LC   |
| Product code   | : 142000  |
| 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                                |   |
| 1.4. Emergency telephone number                                |   |
| Emergency number   | : 1-800-262-8200 CHEMTREC   |
|  |   |
| SECTION 2: Hazard(s) identification                            |   |
| 2.1. Classification of the substance or m                      | ixture  |
| GHS US classification  |   |
| Carcinogenicity, Category 1A                                   | May cause cancer.   |
| Specific target organ toxicity — Repeated expose<br>Category 1 | Ire, Causes damage to organs through prolonged or repeated exposure.  |
| 2.2. GHS Label elements, including prec                        | autionary statements  |
| GHS US labelling   |   |
| Hazard pictograms (GHS US)                                     |   |
| Signal word (GHS US)   | : Danger  |
| Hazard statements (GHS US)                                     | : May cause cancer.   |
|  | Causes damage to organs through prolonged or repeated exposure.   |
| Precautionary statements (GHS US)                              | : Obtain special instructions before use.   |
|  | Do not handle until all safety precautions have been read and understood.<br>Do not breathe dust/fume/gas/mist/vapours/spray.                                 |
|  | Wash hands, forearms and face thoroughly after handling.  |
|  | Do not eat, drink or smoke when using this product.<br>Wear protective gloves/protective clothing/eye protection/face protection.                             |
|  | If exposed or concerned: Get medical advice/attention.  |
|  | Get medical advice/attention if you feel unwell.  |
|  | Dispose of contents/container to hazardous or special waste collection point, in accordance<br>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   |   |
| <b>SECTION 3: Composition/information</b>                      | n on ingredients  |
| 3.1. Substances  |   |
| Not applicable   |   |
| 3.2. Mixtures  |   |
|  |   |

# Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

| Name                               | Product identifier   | %           | GHS US classification             |
|------------------------------------|----------------------|-------------|-----------------------------------|
| Silica, crystalline – cristobalite | (CAS-No.) 14464-46-1 | 9.45 - 13.4 | STOT RE 1, H372                   |
| Crystalline silica                 | (CAS-No.) 14808-60-7 | 0.85 - 2.1  | Carc. 1A, H350<br>STOT RE 1, H372 |

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 or a doctor if you feel unwell.   |
| 4.2. Most important symptoms and effect  | ts (acute and delayed)   |
| No additional information available  |  |
| 4.3. Immediate medical attention and spe   | ecial treatment, if necessary  |
| Treat symptomatically.   |  |
| SECTION 5: Fire-fighting measures  |  |
| 5.1. Suitable (and unsuitable) extinguishing   |  |
| Suitable extinguishing media   | : Water spray. Dry powder. Foam.   |
| 5.2. Specific hazards arising from the che   | emical   |
| No additional information available  |  |
| 5.3. Special protective equipment and protecti |  |
| Protection during firefighting   | : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.   |
| <b>SECTION 6: Accidental release meas</b>  | ures   |
| 6.1. Personal precautions, protective equ  | lipment and emergency procedures   |
| 6.1.1. For non-emergency personnel   |  |
| Emergency procedures   | : Only qualified personnel equipped with suitable protective equipment may intervene. Do not breathe dust/fume/gas/mist/vapours/spray.   |
| 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 authoritie  | es if product enters sewers or public waters.  |
| 6.3. Methods and material for containment  | nt 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. Do not breathe dust/fume/gas/mist/vapours/spray. |
| 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.  |
| 09/25/2019   | EN (English) 2/6   |

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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

Storage conditions

: Store in a well-ventilated place. Keep cool.

# SECTION 8: Exposure controls/personal protection

| 3.1. Control pa       | rameters                       |  |
|-----------------------|--------------------------------|--|
| Silica, crystalline - | - cristobalite (14464-46-1)    |  |
| ACGIH                 | Local name                     | Silica crystaline - cristobalite   |
| ACGIH                 | ACGIH TWA (mg/m <sup>3</sup> ) | 0.025 mg/m <sup>3</sup> (Respirable fraction)  |
| ACGIH                 | Remark (ACGIH)                 | TLV® Basis: Pulm fibrosis; lung cancer. Notations: A2 (Suspected Human Carcinogen)   |
| ACGIH                 | Regulatory reference           | ACGIH 2018   |
| OSHA                  | Remark (OSHA)                  | Table Z-3. For OSHA PEL (TWA): Use ½ the value calculated from the count or mass formulae for quartz. CAS No. source: eCFR Table Z-1.        |
| OSHA                  | Regulatory reference (US-OSHA) | OSHA Annotated Table Z-3 Mineral Dusts   |
| Crystalline silica (  | 14808-60-7)                    |  |
| ACGIH                 | Local name                     | Silica crystaline - quartz   |
| ACGIH                 | ACGIH TWA (mg/m <sup>3</sup> ) | 0.025 mg/m <sup>3</sup> (Respirable fraction)  |
| ACGIH                 | Remark (ACGIH)                 | TLV® Basis: Pulm fibrosis; lung cancer. Notations: A2 (Suspected Human Carcinogen)   |
| ACGIH                 | Regulatory reference           | ACGIH 2018   |
| OSHA                  | Remark (OSHA)                  | Table Z-3. For OSHA PEL (TWA): Use formulas: (250/ (%SiO2+5)) for mppcf and (10 mg/m3 / (%SiO2+2))for mg/m3. CAS No. source: eCFR Table Z-1. |
| OSHA                  | Regulatory reference (US-OSHA) | OSHA Annotated Table Z-3 Mineral Dusts   |

#### 8.2. Appropriate engineering controls

Appropriate engineering controls Environmental exposure controls : Ensure good ventilation of the work station.

: Avoid release to the environment.

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

# Hand protection:

Protective gloves

### Eye protection:

Safety glasses

### Skin and body protection:

Wear suitable protective clothing

# **Respiratory protection:**

[In case of inadequate ventilation] wear respiratory protection.

| 1.1. Information on basic | Information on basic physical and chemical properties |  |
|---------------------------|---|--|
| Physical state            | : Solid   |  |
| Colour                    | : Colourless to white-grey                            |  |
| Ddour                     | : Almost odourless                                    |  |
| Ddour threshold           | : No data available                                   |  |
| н                         | : No data available                                   |  |
| lelting point             | : No data available                                   |  |
| reezing point             | : Not applicable                                      |  |

# Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

| Boiling point                              | : No data available |
|--|---------------------|
| Flash point                                | : Not applicable    |
| Relative evaporation rate (butylacetate=1) | : No data available |
| Flammability (solid, gas)                  | : Non flammable.    |
| Vapour pressure                            | : No data available |
| Relative vapour density at 20 °C           | : No data available |
| Relative density                           | : No data available |
| Solubility                                 | : No data available |
| 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 |
| Explosive limits                           | : Not applicable    |
| Explosive properties                       | : No data available |
| Oxidising properties                       | : No data available |
|  |                     |

9.2. Other information

No additional information available

| SECTI    | SECTION 10: Stability and reactivity  |  |  |  |  |
|----------|---|--|--|--|--|
| 10.1.    | Reactivity  |  |  |  |  |
| The proc | duct is non-reactive under normal conditions of use, storage and transport. |  |  |  |  |
| 10.2.    | Chemical stability  |  |  |  |  |
| Stable u | nder normal conditions.   |  |  |  |  |
| 10.3.    | Possibility of hazardous reactions  |  |  |  |  |
| No dang  | perous reactions known under normal conditions of use.                      |  |  |  |  |
|          |   |  |  |  |  |

10.4. Conditions to avoid

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

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  |  |
| Skin corrosion/irritation             | : Not classified  |  |
| Serious eye damage/irritation         | : Not classified  |  |
| Respiratory or skin sensitisation     | : Not classified  |  |
| Germ cell mutagenicity                | : Not classified  |  |
| Carcinogenicity                       | : May cause cancer.   |  |
| Crystalline silica (14808-60-7)       |   |  |
| IARC group                            | 1 - Carcinogenic to humans  |  |
| Reproductive toxicity                 | : Not classified  |  |
| STOT-single exposure                  | : Not classified  |  |
| STOT-repeated exposure                | : Causes damage to organs through prolonged or repeated exposure. |  |
|                                       |   |  |

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

| Silica, crystalline – cristobalite (14464-46-1) |   |  |
|---|---|--|
| STOT-repeated exposure                          | Causes damage to organs through prolonged or repeated exposure. |  |
| 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 nor to cause long-term adverse effects in the environment. |  |

| 12.2. | Persistence | and | degradability |
|-------|-------------|-----|---------------|
|       |             |     |               |

| Silica, crystalline – cristobalite (14464-46-1) |                                   |  |
|---|-----------------------------------|--|
| Persistence and degradability                   | Biodegradability: not applicable. |  |
| Chemical oxygen demand (COD)                    | Not applicable                    |  |
| ThOD  | Not applicable                    |  |
| BOD (% of ThOD)                                 | Not applicable                    |  |
| Crystalline silica (14808-60-7)                 |                                   |  |
| Persistence and degradability                   | Biodegradability: not applicable. |  |
| Biochemical oxygen demand (BOD)                 | Not applicable                    |  |
| Chemical oxygen demand (COD)                    | Not applicable                    |  |
| ThOD Not applicable                             |                                   |  |
| BOD (% of ThOD)                                 | Not applicable                    |  |

# 12.3. Bioaccumulative potential

| Silica, crystalline – cristobalite (14464-46-1) |                     |                         |  |  |
|---|---------------------|-------------------------|--|--|
| Bioaccu   | umulative potential | No test data available. |  |  |
|   |                     |                         |  |  |
| 12.4.   | Mobility in soil    |                         |  |  |

| Silica, crystalline – cristobalite (14464-46-1) |   |
|---|---|
| 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

# Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

## Transport by sea

Not applicable

### Air transport

Not applicable

| SECTION 15: Regulatory information  |  |  |  |
|---|--|--|--|
| 15.1. US Federal regulations  |  |  |  |
|   |  |  |  |
| Silica, crystalline – cristobalite (14464-46-1)                           |  |  |  |
| 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

| Silica, crystalline – cristobalite (14464-46-1) |   |  |
|---|---|--|
| ſ   | 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

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

Listed on IARC (International Agency for Research on Cancer)

15.3. US State regulations

| Component                                      | State or local regulations   |
|--|--|
| Silica, crystalline – cristobalite(14464-46-1) | 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 |
| 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**

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision date

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#### Full text of H-statements:

| H350 | May cause cancer.   |
|------|---|
| H372 | Causes damage to organs through prolonged or repeated exposure. |

#### SDS US (GHS HazCom 2012)

The information provided in the Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of it's publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release. Reno Refractories, Inc. makes no warranties, expressed or implied, with respect to such information, including, but not limited to, any implied warranty of merchantability or fitness for a particular purpose or course of performance or usage of trade. User is responsible for determining whether the product is fit for a particular purpose and suitable for user's method of use or application. The 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 process, unless specified in the text.