

SECTION 1: Identification

1.1. Identification

Product form : Mixture
 Trade name : RM 70 G
 Product code : 304300

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 mixture

GHS US classification

Carcinogenicity, Category 1A H350 May cause cancer.
 Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS US labelling

Hazard pictograms (GHS US) :



Signal word (GHS US) : Danger
 Hazard statements (GHS US) : H350 - May cause cancer.
 Precautionary statements (GHS US) : P201 - Obtain special instructions before use.
 P202 - Do not handle until all safety precautions have been read and understood.
 P280 - Wear protective gloves/protective clothing/eye protection/face protection.
 P308+P313 - If exposed or concerned: Get medical advice/attention.
 P501 - 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 |
|--------------------|----------------------|--------------|-----------------------------------|
| Titanium dioxide | (CAS-No.) 13463-67-7 | 1.89 - 2.51 | Carc. 2, H351 |
| Crystalline silica | (CAS-No.) 14808-60-7 | 0.21 - 0.701 | 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. Call a poison center or a doctor if you feel unwell. Get medical advice/attention if you feel unwell.
- 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 effects (acute and delayed)

No additional information available

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

No additional information available

5.3. Special protective equipment and precautions for fire-fighters

- 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

- 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.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

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| Crystalline silica (14808-60-7) | | |
|---------------------------------|-------------------------------------|---|
| ACGIH | Local name | Silica crystalline - quartz |
| ACGIH | ACGIH TWA (mg/m ³) | 0.025 mg/m ³ (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 / (%SiO ₂ +5)) for mppcf and (10 mg/m ³ / (%SiO ₂ +2)) for mg/m ³ . CAS No. source: eCFR Table Z-1. |
| OSHA | Regulatory reference (US-OSHA) | OSHA Annotated Table Z-3 Mineral Dusts |
| Titanium dioxide (13463-67-7) | | |
| ACGIH | Local name | Titanium dioxide |
| ACGIH | ACGIH TWA (mg/m ³) | 10 mg/m ³ |
| ACGIH | Remark (ACGIH) | TLV® Basis: LRT irr. Notations: A4 (Not classifiable as a Human Carcinogen) |
| ACGIH | Regulatory reference | ACGIH 2018 |
| OSHA | OSHA PEL (TWA) (mg/m ³) | 15 mg/m ³ |
| OSHA | Regulatory reference (US-OSHA) | OSHA Annotated Table Z-1 |

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:

Safety glasses

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

[In case of inadequate ventilation] wear respiratory protection.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Solid

Colour : Mixture contains one or more component(s) which have the following colour(s): Colourless to white Grey-black Off-white to light grey Yellow-brown to dark brown Pure substance: colourless to white-grey Unpurified: yellow to brown Commercial substance: yellow to brown Silvery Red-brown to black Colourless or white Pure substance: white Unpurified: coloured Silvery-grey to black White Metallic white to silvery White to yellow-brown

Odour : There may be no odour warning properties, odour is subjective and inadequate to warn of overexposure.
Mixture contains one or more component(s) which have the following odour:
Odourless

Odour 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

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| | |
|--|---------------------|
| 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 | : 2.6 |
| Solubility | : Water: < 0.1 % |
| 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

VOC content : 0 %

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).

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 bodyweight (OECD 425: Acute Oral Toxicity: Up-and-Down Procedure, Rat, Female, Experimental value, Oral, 14 day(s)) |
| LC50 inhalation rat (mg/l) | > 6.82 mg/l (Other, 4 h, Rat, Male, Experimental value, Inhalation (dust), 14 day(s)) |
| 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 |

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

| | |
|-----------------------|------------------|
| Reproductive toxicity | : Not classified |
| STOT-single exposure | : Not classified |

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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 nor 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

| 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 |

| Titanium dioxide (13463-67-7) | |
|--------------------------------------|-----------------------------------|
| Persistence and degradability | Biodegradability: not applicable. |
| Chemical oxygen demand (COD) | Not applicable (inorganic) |
| ThOD | Not applicable (inorganic) |

12.3. Bioaccumulative potential

| Titanium dioxide (13463-67-7) | |
|--------------------------------------|----------------------|
| Bioaccumulative potential | Not bioaccumulative. |

12.4. Mobility in soil

| Titanium dioxide (13463-67-7) | |
|--------------------------------------|-------------------------------------|
| Ecology - soil | Low potential for mobility in soil. |

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

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Transportation of Dangerous Goods

Not applicable

Transport by sea

Not applicable

Air transport

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

Crystalline silica (14808-60-7)

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

Titanium dioxide (13463-67-7)

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

15.2. International regulations

CANADA

Crystalline silica (14808-60-7)

Listed on the Canadian DSL (Domestic Substances List)

Titanium dioxide (13463-67-7)

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)

Titanium dioxide (13463-67-7)

Listed on IARC (International Agency for Research on Cancer)

15.3. US State regulations

| Component | State or local regulations |
|--------------------------------|--|
| Crystalline silica(14808-60-7) | U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List |
| Titanium dioxide(13463-67-7) | 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

Full text of H-statements:

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

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SDS US (GHS HazCom 2012)

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