

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 12/16/2022

SECTION 1: Identification

1.1. Identification

Product form : Mixture

Trade name : Reno ASAP Pump 80 ABR

Product code : 613820

1.2. Recommended use and restrictions on use

Recommended use : Refractory Applications

1.3. Supplier

Manufacturer

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 - www.renorefractories.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 H350 May cause cancer

Specific target organ toxicity (repeated exposure) Category 1 H372 Causes damage to organs through prolonged or repeated

exposure

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US)



Signal word (GHS US) : Danger

Hazard statements (GHS US) : H350 - May cause cancer

H372 - Causes damage to organs through prolonged or repeated exposure

Precautionary statements (GHS US) : P201 - Obtain special instructions before use.

P202 - Do not handle until all safety precautions have been read and understood.

P260 - Do not breathe dust/fume/gas/mist/vapors/spray.

P264 - Wash hands, forearms and face thoroughly after handling. P270 - Do not eat, drink or smoke when using this product.

P280 - Wear protective gloves/protective clothing/eye protection/face protection.

P308+P313 - If exposed or concerned: Get medical advice/attention.

P314 - Get medical advice/attention if you feel unwell.

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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)

No additional information available

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	0.88 – 3.92	Carc. 1B, H350
Crystalline silica	CAS-No.: 14808-60-7		Carc. 1A, H350 STOT RE 1, H372
Titanium dioxide	CAS-No.: 13463-67-7	≤ 2.48	Carc. 2, H351

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)

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

Hazardous decomposition products in case of fire : Toxic fumes may be released.

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.

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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. Do not breathe dust/fume/gas/mist/vapors/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 authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up

Other information

: Mechanically recover the product. Notify authorities if product enters sewers or public waters.

: 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/vapors/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.

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

Reno ASAP Pump 80 ABR

No additional information available

Titanium dioxide (13463-67-7)

USA - ACGIH - Occupational Exposure Limits

Local name	Titanium dioxide
	0.2 mg/m³ (Respirable fraction) 2.5 mg/m³ (Respirable fraction)

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Unknown Relevance to Humans ACGIH 2023 SANA - Occupational Exposure Limits Local name Titanium dioxide (Total dust) OSHA PEL (TWA) [1] 15 mg/m² Regulatory reference (US-OSHA) OSHA Annotated Table Z-1 Crystalline silica (14808-60-7) USA - AGGIH - Occupational Exposure Limits Local name Silica crystalline - quartz ACGIH OEL TWA 0.025 mg/m² (Respirable fraction) Remark (ACGIH) TLV® Basis: Pulm fibrosis; lung cancer. Notations: A2 (Suspected Human Carcinogen) Regulatory reference ACGIH 2023 USA - OSHA - Occupational Exposure Limits Local name Quartz (Respirable) (Silica: Crystalline) Remark (DSHA) 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. Regulatory reference (US-OSHA) OSHA Annotated Table Z-3 Mineral Dusts Silicon carbide (409-02+2-2) USA - AGGIH - Occupational Exposure Limits Local name Silicon carbide ACGIH OEL TWA 3 mg/m² (Respirable fraction. The value is for particulate matter containing no asbestos and < 1% crystalline silica) ACGIH OEL TWA 3 mg/m² (Respirable fraction. The value is for particulate matter containing no asbestos and < 1% crystalline silica) ACGIH OEL TWA Non fibrous = TLV® Basis: Pulm dam Fibrous TLV® Basis: Pulm dam Fibrous TLV® Basis: Lung fibrosis; cancer. Notations: A2 (Suspected Human Carcinogen) Regulatory reference ACGIH 2023 USA - AGGIH 2023 USA - AGGIH 2023 ACGIH 2023 ACGIH 2023 ACGIH 2023 ACGIH 2024 ACGIH 2025 ACGIH 2026 ACGIH 2027 ACGIH 2027 ACGIH 2028 ACGIH 2028 ACGIH 2029 ACGIH 2029 ACGIH 2021 ACGIH 2021 ACGIH 2023 ACGIH 2023 ACGIH 2023 ACGIH 2023 ACGIH 2024 ACGIH 2025 ACGIH 2026 ACGIH 2027 ACGIH 2027 ACGIH 2028 ACGIH 2028 ACGIH 2029 ACGIH 2029	Titanium dioxide (13463-67-7)	
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Silicon carbide (409-21-2) USA - ACGIH - Occupational Exposure Limits Local name Silicon carbide ACGIH OEL TWA 3 mg/m³ (Respirable fraction. The value is for particulate matter containing no asbestos and < 1% crystalline silica) 0.1 fibers/cm³ (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/m³ (Inhalable fraction. The value is for particulate matter containing no asbestos and < 1% crystalline silica) Remark (ACGIH) Non fibrous = TLV® Basis: Pulm dam Fibrous (including whiskers) = TLV® Basis: Lung fibrosis; cancer. Notations: A2 (Suspected Human Carcinogen) Regulatory reference USA - OSHA - Occupational Exposure Limits Local name Silicon carbide OSHA PEL (TWA) [1] 15 mg/m³ (Total dust) 5 mg/m³ (Respirable fraction)	Remark (OSHA)	
USA - ACGIH - Occupational Exposure Limits Local name Silicon carbide ACGIH OEL TWA 3 mg/m³ (Respirable fraction. The value is for particulate matter containing no asbestos and < 1% crystalline silica) 0.1 fibers/cm³ (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/m³ (Inhalable fraction. The value is for particulate matter containing no asbestos and < 1% crystalline silica) Remark (ACGIH) Non fibrous = TLV® Basis: Pulm dam Fibrous (including whiskers) = TLV® Basis: Lung fibrosis; cancer. Notations: A2 (Suspected Human Carcinogen) Regulatory reference ACGIH 2023 USA - OSHA - Occupational Exposure Limits Local name Silicon carbide OSHA PEL (TWA) [1] 15 mg/m³ (Total dust) 5 mg/m³ (Respirable fraction)	Regulatory reference (US-OSHA)	OSHA Annotated Table Z-3 Mineral Dusts
Local name Silicon carbide ACGIH OEL TWA 3 mg/m³ (Respirable fraction. The value is for particulate matter containing no asbestos and < 1% crystalline silica)	Silicon carbide (409-21-2)	
a mg/m³ (Respirable fraction. The value is for particulate matter containing no asbestos and < 1% crystalline silica) 0.1 fibers/cm³ (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/m³ (Inhalable fraction. The value is for particulate matter containing no asbestos and < 1% crystalline silica) Remark (ACGIH) Non fibrous = TLV® Basis: Pulm dam Fibrous (including whiskers) = TLV® Basis: Lung fibrosis; cancer. Notations: A2 (Suspected Human Carcinogen) Regulatory reference ACGIH 2023 USA - OSHA - Occupational Exposure Limits Local name Silicon carbide OSHA PEL (TWA) [1] 15 mg/m³ (Total dust) 5 mg/m³ (Respirable fraction)	USA - ACGIH - Occupational Exposure Limits	
1% crystalline silica) 0.1 fibers/cm³ (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/m³ (Inhalable fraction. The value is for particulate matter containing no asbestos and < 1% crystalline silica) Remark (ACGIH) Non fibrous = TLV® Basis: Pulm dam Fibrous (including whiskers) = TLV® Basis: Lung fibrosis; cancer. Notations: A2 (Suspected Human Carcinogen) Regulatory reference ACGIH 2023 USA - OSHA - Occupational Exposure Limits Local name Silicon carbide OSHA PEL (TWA) [1] 15 mg/m³ (Total dust) 5 mg/m³ (Respirable fraction)	Local name	Silicon carbide
Fibrous (including whiskers) = TLV® Basis: Lung fibrosis; cancer. Notations: A2 (Suspected Human Carcinogen) Regulatory reference ACGIH 2023 USA - OSHA - Occupational Exposure Limits Local name Silicon carbide OSHA PEL (TWA) [1] 15 mg/m³ (Total dust) 5 mg/m³ (Respirable fraction)	ACGIH OEL TWA	1% crystalline silica) 0.1 fibers/cm³ (Respirable fibers: length > 5 μ m; aspect ratio ≥ 3:1, as determined by the membrane filter method at 400-450X magnification (4-mm objective), using phase-contrast illumination) 10 mg/m³ (Inhalable fraction. The value is for particulate matter containing no asbestos and <
USA - OSHA - Occupational Exposure Limits Local name Silicon carbide OSHA PEL (TWA) [1] 15 mg/m³ (Total dust) 5 mg/m³ (Respirable fraction)	Remark (ACGIH)	Fibrous (including whiskers) = TLV® Basis: Lung fibrosis; cancer. Notations: A2 (Suspected
Local name Silicon carbide OSHA PEL (TWA) [1] 15 mg/m³ (Total dust) 5 mg/m³ (Respirable fraction)	Regulatory reference	ACGIH 2023
OSHA PEL (TWA) [1] 15 mg/m³ (Total dust) 5 mg/m³ (Respirable fraction)	USA - OSHA - Occupational Exposure Limits	
5 mg/m³ (Respirable fraction)	Local name	Silicon carbide
Regulatory reference (US-OSHA) OSHA Annotated Table Z-1	OSHA PEL (TWA) [1]	
	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.

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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.

Personal protective equipment symbol(s):







SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Solid

Appearance : Granular powder.

Color : Colourless to white-grey

Odor : Almost odorless Odor threshold : No data available : No data available рΗ 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 : Non flammable. Flammability (solid, gas) 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 No data available Decomposition temperature Viscosity, kinematic Not applicable Viscosity, dynamic No data available

9.2. Other information

Explosion limits

Explosive properties

Oxidizing properties

No additional information available

Not applicable

No data available

: No data available

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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	> 2000 mg/kg body weight (OECD 401: Acute Oral Toxicity, Rat, Male / female, Experimental value, Oral, 14 day(s))
LC50 Inhalation - Rat	> 5.09 mg/l (OECD 403: Acute Inhalation Toxicity, 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, 14 day(s))
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

Titanium dioxide (13463-67-7)		
рН	7 (aqueous suspension, 10 %)	
Crystalline silica (14808-60-7)		
рН	6 – 7	
Silicon carbide (409-21-2)		
рН	Not applicable (non-soluble in water), CIPAC MT 75: Determination of pH	
Serious eye damage/irritation :	Not classified	

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Titanium dioxide (13463-67-7)	
рН	7 (aqueous suspension, 10 %)
Crystalline silica (14808-60-7)	
рН	6 – 7
Silicon carbide (409-21-2)	
рН	Not applicable (non-soluble in water), CIPAC MT 75: Determination of pH
Respiratory or skin sensitization : Germ cell mutagenicity :	Not classified Not classified
	May cause cancer.
Titanium dioxide (13463-67-7)	
IARC group	2B - Possibly carcinogenic to humans
Crystalline silica (14808-60-7)	
IARC group	1 - Carcinogenic to humans
Silicon carbide (409-21-2)	
IARC group	2A - Probably carcinogenic to humans
- 1	Not classified
STOT-single exposure :	Not classified
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.
- P	Not classified
•	Not applicable
Titanium dioxide (13463-67-7)	
Viscosity, kinematic	Not applicable
Crystalline silica (14808-60-7)	
Viscosity, kinematic	Not applicable (solid)
Silicon carbide (409-21-2)	
Viscosity, kinematic	Not applicable (solid)

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]	> 300 mg/l (Danio rerio, Fresh water, Literature study, Nominal concentration)	
EC50 - Crustacea [1]	> 100 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Locomotor effect)	
Silicon carbide (409-21-2)		
ErC50 algae	> 100 mg/l (OECD 201: Alga, Growth Inhibition Test, 48 h, Desmodesmus subspicatus, Static system, Fresh water, Experimental value, GLP)	

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12.2. Persistence and degradability

Titanium dioxide (13463-67-7)		
Persistence and degradability	Biodegradability: not applicable.	
Chemical oxygen demand (COD)	Not applicable (inorganic)	
ThOD	Not applicable (inorganic)	
Crystalline silica (14808-60-7)		
Persistence and degradability	Biodegradability: not applicable.	
Chemical oxygen demand (COD)	Not applicable (inorganic)	
ThOD	Not applicable (inorganic)	

Silicon carbide (409-21-2)		
	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.	
Crystalline silica (14808-60-7)		
Bioaccumulative potential	Bioaccumulation: not applicable.	
Silicon carbide (409-21-2)		
Bioaccumulative potential	Not bioaccumulative.	

12.4. Mobility in soil

Titanium dioxide (13463-67-7)		
No data available in the literature		
Low potential for mobility in soil.		
Crystalline silica (14808-60-7)		
No (test)data on mobility of the substance available.		
Silicon carbide (409-21-2)		
No data available in the literature		

Low potential for adsorption in soil.

Ecology - 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.

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SECTION 14: Transport information

In accordance with DOT / TDG / IMDG / IATA

14.1. UN number

Not regulated for transport

14.2. UN proper shipping name

Proper Shipping Name (DOT) : Not applicable
Proper Shipping Name (TDG) : Not applicable
Proper Shipping Name (IMDG) : Not applicable
Proper Shipping Name (IATA) : Not applicable

14.3. Transport hazard class(es)

DOT

Transport hazard class(es) (DOT) : Not applicable

TDG

Transport hazard class(es) (TDG) : Not applicable

IMDG

Transport hazard class(es) (IMDG) : Not applicable

IATA

Transport hazard class(es) (IATA) : Not applicable

14.4. Packing group

Packing group (DOT) : Not applicable
Packing group (TDG) : Not applicable
Packing group (IMDG) : Not applicable
Packing group (IATA) : Not applicable

14.5. Environmental hazards

Other information : No supplementary information available.

14.6. Special precautions for user

DOT

No data available

TDG

No data available

IMDG

No data available

IATA

No data available

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

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SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

15.2. International regulations

CANADA

Titanium dioxide (13463-67-7)

Listed on the Canadian DSL (Domestic Substances List)

Crystalline silica (14808-60-7)

Listed on the Canadian DSL (Domestic Substances List)

Silicon carbide (409-21-2)

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)

Crystalline silica (14808-60-7)

Listed on IARC (International Agency for Research on Cancer)

Silicon carbide (409-21-2)

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
Crystalline silica(14808-60-7)	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 Massachusetts - Right To Know List; 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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Full text of H-phrases	
H350	May cause cancer
H351	Suspected of causing cancer
H372	Causes damage to organs through prolonged or repeated exposure

Reno Safety Data Sheet (SDS), USA

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