

Material Safety Data Sheet

Reviewed on 08/01/2004

1 Identification of substance**Product details**Trade name: **MOLECULAR SIEVE 513**

Article number: 5101798 5101526 5101854 5101809

Manufacturer/Supplier:GRACE Davison
W.R.GRACE & CO.-CONN
7500 Grace DR
Columbia, MD 21044

Information department: Health and Safety (9 AM to 5 PM-EST) 1-410-531-4764

Emergency information:Transportation Emergency (24 hr) Chemtrec 1-800-424-9300
Other Emergencies (24 hr) 1-410-531-4000**2 Data on components**

CAS No. &	List of Components
1318-02-1	zeolite (crystalline aluminosilicate)
	Proprietary Binder
14808-60-7	quartz (SiO ₂)

Additional information:

Quartz is a natural occurring component of the binder. See note in Section 3.

3 Hazards identification**Information pertaining to particular dangers for man and environment:**

The product does not have to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the European Union" in the latest valid version.

Classification system:

The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

NFPA ratings (scale 0 - 4)Health = 1
Fire = 0
Reactivity = 0**HMIS-ratings (scale 0 - 4)**Health = 1
Fire = 0
Reactivity = 0**Additional information:**

This product contains less than 1 % quartz which is part of a natural raw material.

(Contd. on page 2)

USA

Material Safety Data Sheet

Trade name: **MOLECULAR SIEVE 513**

(Contd. of page 1)

However, quartz has been recently classified by IARC (International Agency for Research on Cancer) as carcinogenic to humans by inhalation (Group I). Furthermore, quartz can cause silicosis and other lung diseases on prolonged exposure.

It is not expected that the operator will be exposed to free respirable quartz particles in excess of the limits allowed by the worker protection regulations. Nevertheless, the user is responsible for controlling the working environment according to local regulations, e.g. in the UK: COSHH Regulations.

* 4 First aid measures

After inhalation: Supply fresh air; consult doctor in case of complaints.

After skin contact:

Generally the product does not irritate the skin.

Immediately rinse with water.

If skin irritation occurs, consult a doctor.

After eye contact:

Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. If symptoms occur, consult a doctor.

After swallowing:

If large amounts are swallowed, Wash mouth out with water. Get medical aid if irritation or symptoms occur.

* 5 Fire fighting measures

Suitable extinguishing agents:

CO₂, extinguishing powder or water spray. Fight larger fire with alcohol resistant foam.

Use fire fighting measures that suit the environment.

Protective equipment: Wear protective equipment.

Additional information

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

* 6 Accidental release measures

Person-related safety precautions:

Avoid formation of dust.

Wear protective clothing.

Measures for environmental protection:

Do not allow to enter into sewers, surface water and/or groundwater.

Measures for cleaning/collecting:

Pick up mechanically.

Use appropriate industrial vacuum cleaners or central vacuum systems for dust removal.

Dispose of the collected material according to regulations.

Additional information:

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

(Contd. on page 3)

Material Safety Data Sheet

Trade name: **MOLECULAR SIEVE 513**

(Contd. of page 2)

See Section 13 for disposal information.

7 Handling and storage**Handling:****Information for safe handling:** Prevent formation of dust.**Information about protection against explosions and fires:** The product is not flammable.**Storage:****Further information about storage conditions:** Keep receptacle tightly sealed.**Class according to regulation on flammable liquids:** None Applicable**8 Exposure controls and personal protection****Components with limit values that require monitoring at the workplace:****1318-02-1 zeolite (crystalline aluminosilicate)**

PEL	*15 **5 mg/m ³ OSHA TWA *Total Dust **Respirable
TLV	*10 **3 mg/m ³ ACGIH TWA *Total Dust **Respirable

Proprietary Binder

PEL	15* 5** mg/m ³ OSHA TWA Total* Respirable** (fibrous dust)
TLV	10* 5** mg/m ³ ACGIH TWA Total* Respirable** (fibrous dust)

14808-60-7 quartz (SiO₂)

PEL	*30 mg/m ³ / (%SiO ₂ + 2), **10 mg/m ³ / (%SiO ₂ + 2) OSHA TWA *Total dust **Respirable dust
REL	0.05* mg/m ³ NIOSH TWA *Respirable dust
TLV	0.05* mg/m ³ ACGIH TWA *Respirable dust

Personal protective equipment:**General protective and hygienic measures:**

The usual precautionary measures for handling chemicals should be followed.

Breathing equipment:

If exposure limit is exceeded, a suitable respiratory protective device is recommended.

Protection of hands:

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

(Contd. on page 4)

USA

Material Safety Data Sheet

Trade name: **MOLECULAR SIEVE 513**

(Contd. of page 3)

Eye protection:

Safety glasses

Body protection: Protective work clothing* **9 Physical and chemical properties****General Information**

Form:	Beads
Color:	Grayish white. Beige
Odor:	Odorless

Change in condition**Melting point/Melting range:** Undetermined.**Flash point:** Not applicable.**Auto igniting:** Product is not self-igniting.**Danger of explosion:** Product does not present an explosion hazard.**Density at 20°C (68°F):** 40 - 50 lbs/ft³**Solubility in / Miscibility with****Water:** Insoluble.**pH-value at 20°C (68°F):** 10.3 - 10.5 (in slurry)* **10 Stability and reactivity****Thermal decomposition / conditions to be avoided:**

No decomposition if used according to specifications.

Dangerous reactions Reacts with acids, alkalis and oxidizing agents.**Dangerous products of decomposition:** No dangerous decomposition products known.* **11 Toxicology information****Acute toxicity:****LD/LC50 values that are relevant for classification:****1318-02-1 zeolite (crystalline aluminosilicate)**

Oral	LD50	> 5110 mg/kg (rat)
		Organization for Economic Cooperation and Development 401
Dermal	LD50	> 2000 mg/kg (rabbit)
Inhalative	LC50 (1 h)	> 18.3 mg/l (rat)

(Contd. on page 5)

USA

Material Safety Data Sheet

Trade name: **MOLECULAR SIEVE 513**

(Contd. of page 4)

Primary irritant effect:**on the skin:** May cause irritation with dryness and abrasion.**in the eye:** May cause abrasion, redness and pain.**Sensitization:** Sensitizing effect through inhalation is possible with prolonged exposure.**Additional toxicological information:**

The product is not subject to classification according to internally approved calculation methods for preparations:

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

12 Ecology information**Ecotoxicological effects:****Aquatic toxicity:****Fish toxicity****1318-02-1 zeolite (crystalline aluminosilicate)**

LC50 (96 h)	1800 mg/l (Brachydanio rerio)
Organization for Economic Cooperation and Development 203	

Water flea toxicity**1318-02-1 zeolite (crystalline aluminosilicate)**

EC50 (24 h)	2808 mg/l (Daphnia magna)
Organization for Economic Cooperation and Development 202	

Algae toxicity**1318-02-1 zeolite (crystalline aluminosilicate)**

NOEC (96 h)	10 mg/l (Scenedesmus subspicatus)
Organization for Economic Cooperation and Development 201	

Bacterial toxicity**1318-02-1 zeolite (crystalline aluminosilicate)**

-	- (Pseudomonas putida)
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General notes: Generally not hazardous for water**13 Disposal considerations****Product:****Recommendation:**

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

USA

(Contd. on page 6)

Material Safety Data Sheet

Trade name: **MOLECULAR SIEVE 513**

(Contd. of page 5)

14 Transport information**Transport/Additional information:**

Not regulated as hazardous goods by DOT, ADR, IMO, or IATA.

15 Regulations

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Section 355 (extremely hazardous substances):

None of the ingredients are listed.

Section 313 (Specific toxic chemical listings):

None of the ingredients are listed.

TSCA (Toxic Substances Control Act):

Zeolites are considered for TSCA purposes to be mixtures of the substances used to manufacture them.

All ingredients are listed.

Proposition 65**Chemicals known to cause cancer:**

	Proprietary Binder
14808-60-7	quartz (SiO ₂)

Chemicals known to cause reproductive toxicity:

None of the ingredients are listed.

Carcinogenicity categories**EPA (Environmental Protection Agency)**

None of the ingredients are listed.

IARC (International Agency for Research on Cancer)

	Proprietary Binder	2B;3
14808-60-7	quartz (SiO ₂)	1

NTP (National Toxicology Program)

14808-60-7	quartz (SiO ₂)	R
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TLV (Threshold Limit Value established by ACGIH)

14808-60-7	quartz (SiO ₂)	A2
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MAK (German Maximum Workplace Concentration)

	Proprietary Binder	2
14808-60-7	quartz (SiO ₂)	1

NIOSH-Ca (National Institute for Occupational Safety and Health)

14808-60-7	quartz (SiO ₂)
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OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients are listed.

Canadian DSL

1318-02-1	zeolite (crystalline aluminosilicate)
14808-60-7	quartz (SiO ₂)

(Contd. on page 7)

USA

Material Safety Data Sheet

Trade name: **MOLECULAR SIEVE 513**

(Contd. of page 6)

Canadian NDSL

Proprietary Binder

Japan ENCS

All ingredients are listed.

Korea ECL

1318-02-1 zeolite (crystalline aluminosilicate)

14808-60-7 quartz (SiO₂)**Philippines: PICCS**

All ingredients are listed.

Australia: AICS

All ingredients are listed.

European EINECS

1318-02-1 zeolite (crystalline aluminosilicate)

14808-60-7 quartz (SiO₂)**Product related hazard information:**

Observe the general safety regulations when handling chemicals.

The product is not subject to identification regulations according to directives on hazardous materials.

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.

Department issuing MSDS: GRACE Davison Safety & Health Department

(Contd. on page 8)

USA

Material Safety Data Sheet

Trade name: MOLECULAR SIEVE 513

(Contd. of page 7)

Contact:
SALES OFFICESUSA:
GRACE Davison
7500 Grace DR
Columbia, MD 21044
410-531-4000Europe:
Grace GmbH & Co. K.G.
In der Hollerhecke 1
Postfach 1445
D-67545 Worms, Germany
49 (6241) 4030Asia Pacific:
W. R. Grace Pte. Ltd.
501 Orchard Road
05-11/12 Wheelock Place
Singapore 238880
(65) 6737-5488*** Data compared to the previous version altered.**

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