

Material Safety Data Sheet

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Status: 06/17/2003

Version: 1.

Specialty Resin Systems

DEGADUR[®] R7/17 Powder Component

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1. Chemical Product and Company Identification

DEGADUR[®] R7/17 Powder Component

Synonyms: Silica Sand, Quartz, Flint, Crystalline Silica, Ground Silica.

Supplier:

DEGUSSA Corp./Röhm America LLC.
2 Turner Place, P.O. Box 365
Piscataway, NJ 08855

Manufacturer:

Röhm GmbH & Co. KG
Kirschenallee
D-64293 Darmstadt
Germany

Non-Emergency Product 800-477-4545/
Information: 203-754-8373
Emergency Only
CHEMTREC: 800-424-9300

Product Use: industrial coating aggregate

2. Composition/Information on Ingredients

This material is classified as hazardous under OSHA regulations.

<u>Ingredients</u>	<u>CAS Reg. No.</u>	<u>Weight %</u>
quartz	14808-60-7	15 - 40
silica, crystalline (airborne particles of respirable size)	.	30 - 60
limestone	1317-65-3	3 - 7
benzoyl peroxide	94-36-0	0.1 - 1

See Section 8, Exposure Controls/Personal Protection

3. Hazards Identification

Emergency Overview

Color: light grey
Appearance: sand
Odor: odorless

Dust causes eye, nose and throat irritation.

Prolonged inhalation of dust may lead to permanent lung injury (silicosis)

Symptoms include difficulty breathing, chest pains and cough.

Symptoms may not develop until after years of exposure.

Primary Routes of Exposure

Inhalation
Eye contact (if exposed to dust)

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Potential Health Effects

Inhalation

Excessive or prolonged exposure may cause permanent lung injury.
See Chronic Effects.

Eye Contact

Dust of material can cause the following:
- crystalline silica (quartz) may cause abrasion of the cornea.

Skin Contact

Dust of material can cause the following:
- mechanical irritation
- drying of the skin

Ingestion

No hazard expected in normal use.

Chronic Effects

Prolonged exposure to respirable crystalline quartz may cause delayed (chronic) lung injury (silicosis). Acute or rapidly developing silicosis may occur in a short period of time in heavy exposure in certain occupations. Silicosis is a form of disabling pulmonary fibrosis which can be progressive and may lead to death. See also the carcinogen designations in section 8.

Target Organs

Pulmonary function may be reduced by inhalation of respirable crystalline silica. Also, lung scarring produced by such inhalation may lead to progressive massive fibrosis of the lung which may aggravate other pulmonary conditions and diseases and which increases susceptibility to pulmonary tuberculosis. Heart enlargement, heart failure, and pulmonary failure may accompany progressive massive fibrosis. Smoking aggravates the effects of exposure.

Potential Environmental Effects

See SECTION 12, Ecological Information

4. First Aid Measures

First Aid Procedures

Inhalation

Remove to fresh air. If breathing is difficult, give oxygen. Get immediate medical attention.

Eye Contact

If mechanical irritation occurs flush eyes thoroughly with a large amount of water, consult a physician if irritation persists. Do not rub or scratch your eyes.

Skin Contact

Wash off with water and soap. Consult a physician if irritation persists.

Ingestion

Ingestion is not considered a potential route of exposure.

5. Fire-Fighting Measures

Flash point	non-combustible, melts
Ignition temperature	not applicable
Autoignition Temperature	not applicable
Lower explosion limit	not applicable

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Upper explosion limit not applicable

OSHA Flammability Classification none

Other Flammable Properties

Product itself is non-combustible; Fire extinguishing method of surrounding areas must be discussed.

6. Accidental Release Measures

Procedures

Clean up using dustless procedure. Use water and/or vacuum. Dispose of in accordance with regulations.

7. Handling and Storage

Handling

Avoid dust formation. Use dustless systems for handling, storage and clean up so that airborne dust does not exceed the PEL. Use adequate ventilation and dust collection.

Storage

Keep container tightly closed and store in a cool, well ventilated area. Do not store crystalline Silica (Quartz) with hydrofluoric acid, fluorine, chlorine trifluoride or oxygen difluoride.

8. Exposure Controls/Personal Protection

Exposure Limit Information

SILICA-CRYSTALLINE QUARTZ

(CAS No. 14808-60-7)

Carcinogen designation(s) USA: IARC-1; NIOSH-Ca; NTP-K; TLV-A2

Occupational Exposure Values :	Remark(s):
ACGIH TLV-TWA	0.05 mg/m ³ (respirable fraction)
ACGIH TLV-STEL	not established
OSHA PEL-TWA	30 mg/m ³ (total dust) / % SiO ₂ + 2
OSHA PEL-STEL	250 mppcf (respirable dust) / % SiO ₂ + 5 or 10 mg/m ³ (respirable dust) / % SiO ₂ + 5
OEL-TWA (Alberta)	0.1 mg/m ³ (respirable dust)
OEL-STEL (Alberta)	not established
OEL-TWA (British Columbia)	0.1 mg/m ³ Keep exposure as low as reasonably achievable.
OEL-STEL (British Columbia)	not established
OEL-TWA (Ontario)	not established
OEL-STEL (Ontario)	not established
OEL-TWA (Quebec)	0.1 mg/m ³ (respirable dust)
OEL-STEL (Quebec)	not established
OEL-TWA (Mexico)	0.29 mg/m ³ (total dust)
OEL-TWA (Mexico)	0.098 mg/m ³ (respirable dust)
OEL-STEL (Mexico)	not established

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SILICA (SiO₂), AMORPHOUS

(CAS No. , 7631-86-9 resp. 112945-52-5)

Occupational Exposure Values :

Remark(s):

Occupational Exposure Values	Remark(s)
ACGIH TLV-TWA	not established
ACGIH TLV-STEL	not established
OSHA PEL-TWA	not established
OSHA PEL-STEL	not established
OEL-TWA (Alberta)	2 mg/m ³ (respirable dust)
OEL-TWA (Alberta)	5 mg/m ³ (total dust)
OEL-STEL (Alberta)	not established
OEL-TWA (British Columbia)	1.5 mg/m ³ (respirable dust)
OEL-TWA (British Columbia)	4 mg/m ³ (total dust)
OEL-STEL (British Columbia)	not established
OEL-TWA (Ontario)	not established
OEL-STEL (Ontario)	not established
OEL-TWA (Quebec)	not established
OEL-STEL (Quebec)	not established
OEL-TWA (Mexico)	706 million particles/m ³
OEL-STEL (Mexico)	not established

BENZOYL PEROXIDE

(CAS No. 94-36-0)

Carcinogen designation(s) USA: IARC-3; TLV-A4

Occupational Exposure Values :

Remark(s):

Occupational Exposure Values	Remark(s)
ACGIH TLV-TWA	5 mg/m ³
ACGIH TLV-STEL	not established
OSHA PEL-TWA	5 mg/m ³
OSHA PEL-STEL	not established
OEL-TWA (Alberta)	5 mg/m ³
OEL-STEL (Alberta)	10 mg/m ³
OEL-TWA (British Columbia)	5 mg/m ³
OEL-STEL (British Columbia)	not established
OEL-TWA (Ontario)	5 mg/m ³
OEL-STEL (Ontario)	not established
OEL-TWA (Quebec)	5 mg/m ³
OEL-STEL (Quebec)	not established
OEL-TWA (Mexico)	5 mg/m ³
OEL-STEL (Mexico)	not established

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LIMESTONE

(CAS No. 1317-65-3)

Occupational Exposure Values :

Remark(s):

Occupational Exposure Values :	Remark(s):
OEL-TWA (Alberta)	10 mg/m3 (total dust)
OEL-STEL (Alberta)	not established
ACGIH TLV-TWA	10 mg/m3
ACGIH TLV-STEL	not established
OSHA PEL-TWA	15 mg/m3 (total dust)
OSHA PEL-TWA	5 mg/m3 (respirable fraction)
OSHA PEL-STEL	not established
OEL-TWA (Alberta)	5 mg/m3 (respirable dust)
OEL-TWA (British Columbia)	10 mg/m3 (total dust)
OEL-TWA (British Columbia)	3 mg/m3 (respirable dust)
OEL-STEL (British Columbia)	not established
OEL-TWA (Ontario)	10 mg/m3 (total dust)
OEL-STEL (Ontario)	not established
OEL-TWA (Quebec)	10 mg/m3 (total dust)
OEL-STEL (Quebec)	not established
OEL-TWA (Mexico)	10 mg/m3
OEL-STEL (Mexico)	not established

Engineering Controls (Ventilation)

If use operations generate dust, use ventilation to keep exposure to airborne contaminants below the exposure limit. Refer to the current edition of 'Industrial Ventilation: A Manual of Recommended Practice' published by the American Conference of Government Industrial Hygienists for information on the design, installation, use, and maintenance of exhaust systems.

Respiratory Protection

A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 or applicable federal/provincial requirements must be followed whenever workplace conditions warrant respirator use. NIOSH's "Respirator Decision Logic" may be useful in determining the suitability of various types of respirators.

Eye Protection

Use chemical splash goggles.

Skin Protection

impermeable protective clothing

Hand Protection

General use gloves are recommended to protect the skin from drying and irritation. Gloves should be replaced regularly, especially after extended contact with the product. For each work-place a suitable glove type has to be selected.

Other Protective Equipment

To identify additional Personal Protective Equipment (PPE) requirements, it is recommended that a hazard assessment in accordance with the OSHA PPE Standard (29CFR1910.132) be conducted before using this product.

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9. Physical and Chemical Properties

Appearance	light grey
Physical state	sand
Odor	odorless
Flash point	non-combustible, melts
pH-value	not applicable
Specific gravity (water = 1)	2.65 g/cm ³
Vapor density (air = 1)	not applicable
Vapor pressure	not volatile
Melting temperature	1,710 °C / 3,110 °F
Boiling Temperature	not applicable
Solubility in water	insoluble
Coefficient of Water/Oil Distribution	not applicable
Evaporation rate	not applicable
Odor threshold	not volatile
Further information	none

See Section 5, Fire Fighting Measures

10. Stability and Reactivity

Stability

This product is stable under normal storage conditions.

Conditions To Avoid

Operations that create dust.

Incompatibility With Other Materials

Contact with powerful oxidizing agents may cause fires.

Hazardous Decomposition Products

Quartz will dissolve in hydrofluoric acid and produce a corrosive gas - silicon tetrafluoride.

Hazardous Polymerization

Product will not undergo polymerization.

11. Toxicological Information

Further Information on

There are no toxicological data available for the product as such. The fine particles contained in the product may cause mechanical irritations of the skin, eyes and mucous membranes. Avoid skin and eye contact and inhalation of product dust/aerosols. Prolonged inhalation of quartz dust above the recommended exposure limits may cause dust lung (silicosis). See section 3, Potential Health Effects.

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12. Ecological Information

Information on Elimination (Persistence and Degradability)

Ecotoxicological Effect

Further Information on Ecology

Do not allow to enter soil, waterways or waste water

13. Disposal Considerations

Procedures

Waste must be disposed of in accordance with federal, state and local regulations.

14. Transport Information

US DOT Hazard Classification

Not subject to the regulations on dangerous goods.

Canadian TDG Classification

Not subject to the regulations on dangerous goods.

Shipment by sea

Not subject to the regulations on dangerous goods.

Air transport ICAO/IATA

Not subject to the regulations on dangerous goods.

15. Regulatory Information

INVENTORY INFORMATION

EC EINECS	listed
USA TSCA	listed
USA FDA	not available
Canada DSL	listed
Australia AICS	all components are listed or are exempted from listing
Japan MITI	not available
South Korea ECL	not available
Philippines PICCS	not listed
New Zealand	not available
China	not available

US FEDERAL REGULATORY INFORMATION

Component / CASRN	TPQ [lbs]	CERCLA RQ [lbs] (40CFR302.4)	SARA 302 List of EHS	SARA 313 (40CFR372)	TSCA 12b
benzoyl peroxide / 94-36-0	NONE	NONE	NO	YES	NO

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COMPONENT CLASSIFICATION UNDER CLEAN AIR ACT SECTION 112

Component / CASRN	Weight %	HAP	EHAP
NONE			

PRODUCT CLASSIFICATION UNDER SECTION 311/312 OF SARA (40CFR370)

ACUTE, CHRONIC,

US STATE REGULATORY INFORMATION

Component / CASRN	New Jersey RTK	Pennsylvania RTK	Massachusetts RTK	California Proposition 65 Cancer	California Proposition 65 Reproductive
quartz / 14808-60-7	YES	YES	YES	NO	NO
silica, crystalline (airborne particles of respirable size) / .	NO	NO	NO	YES	NO
limestone / 1317-65-3	NO	YES	YES	NO	NO
benzoyl peroxide / 94-36-0	YES	YES	YES	NO	NO

16. Other Information

	Health	Flammability	Physical Hazard
HMIS-Ratings	1*	0	0
NFPA-Ratings	1	0	0

HMIS Hazard Ratings

4 = severe
3 = serious
2 = moderate
1 = slight
0 = minimal
N = no rating for powders
* = chronic health hazard

NFPA Hazard Ratings

4 = extreme
3 = high
2 = moderate
1 = slight
0 = insignificant
N = no rating for powders

This MSDS was prepared in accordance with ANSI Z400.1-1998.

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