

Material Safety Data Sheet



07/14/2006

Reviewed on 07/14/2006

* **1 Identification of substance****Product details**Trade name: **GRADE 45**

Article number: 5101262 5101502 5101518 5101547 5101552 5102302

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) 1-410-531-4000**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
7631-86-9	amorphous silicon dioxide, chemically prepared
7646-79-9	cobalt chloride Carc. Cat. 2;  T,  N; R 49-22-42/43-50/53

Additional information: For the wording of the component risk phrases refer to section 16.* **3 Hazards identification****Hazard description:**

T Toxic

Information pertaining to particular dangers for man and environment:

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the European Union" in the latest valid version.

R 49 May cause cancer by inhalation.

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 = 2
Fire = 0
Reactivity = 0

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HMIS-ratings (scale 0 - 4)

HEALTH	*2	Health = *2
FIRE	0	Fire = 0
REACTIVITY	0	Reactivity = 0

Canadian Hazard Symbol**WHMIS classification**

Toxic Material Causing Immediate and Serious Toxic Effects
 Very Toxic Material Causing Other Toxic Effects

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 fires with water spray or 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 material in accordance with official regulations.

6 Accidental release measures**Person-related safety precautions:**

Avoid formation of dust.

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Wear protective clothing.

Measures for environmental protection:

Sweep up and containerize for reclamation or disposal.

Measures for cleaning/collecting:

Avoid formation of dust.

Dispose of the collected material according to regulations.

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

Additional information:

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage**Handling:****Information for safe handling:**

Prevent formation of dust.

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

Information about protection against explosions and fires:

The product is not flammable.

When pouring powder into a container of flammable liquid, ground both containers electrically to prevent a static electric spark.

Keep respiratory protective device available.

Storage:**Information about storage in one common storage facility:** Store away from foodstuffs.**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:****7631-86-9 amorphous silicon dioxide, chemically prepared**

PEL	80/(%SiO ₂) mg/m ³ OSHA TWA for amorphous silica
REL	6 mg/m ³ NIOSH TWA
TLV	10* 5** mg/m ³ ACGIH TWA *Total Dust **Respirable fraction

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7646-79-9 cobalt chloride

PEL	0.1* mg/m ³ *For metal dust & fume, as Co
REL	0.05* mg/m ³ *For metal dust & fume, as Co
TLV	0.02,A3 mg/m ³ as Co

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

Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Store protective clothing separately.

Breathing equipment:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
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.

Eye protection:

Safety glasses

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

Form:	Beads
Color:	White Blue
Odor:	Odorless

Change in condition**Melting point/Melting range:** Undetermined.**Flash point:** Not applicable.

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Auto igniting:	Product is not self-igniting.
Danger of explosion:	Product does not present an explosion hazard.
Density at 20°C (68°F):	2.0 - 2.5 g/cm ³
Solubility in / Miscibility with Water:	Insoluble.
pH-value at 20°C (68°F):	4.5 - 6.5 (slurry)

* **10 Stability and reactivity****Thermal decomposition / conditions to be avoided:**

No decomposition if used according to specifications.

Dangerous reactions Reacts with Hydrogen fluoride**Dangerous products of decomposition:** No dangerous decomposition products known.* **11 Toxicology information****Acute toxicity:****LD/LC50 values that are relevant for classification:****7631-86-9 amorphous silicon dioxide, chemically prepared**

Oral	LD50	>5110 mg/kg (rat) IUCLID Dataset 18-Feb-2000 OECD TG 401
Dermal	LD50	> 5000 mg/kg (rabbit) IUCLID Dataset 18-Feb-2000 OECD TG 402
Inhalative	LC50	> 0.139 mg/l/14h (rat)
7646-79-9 cobalt chloride		
Oral	LD50	80 mg/kg (rat) Oker-Chemie MSDS (07/02/2005)

Primary irritant effect:**on the skin:** May cause irritation with dryness and abrasion.**in the eye:** May cause abrasion, redness and pain.**Sensitization:** No sensitizing effects known.**Subacute to chronic toxicity:**

Amorphous silicon dioxide, chemically prepared:

No negative effects were determined during tests for chronic oral toxicity, carcinogenicity, teratogenicity and fertility. No irreversible changes and no symptoms of silicosis were determined during tests for chronic inhalative toxicity.

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Additional toxicological information:

The product shows the following dangers 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.
Carcinogenic if inhaled.

12 Ecology information**Ecotoxicological effects:****Aquatic toxicity:****Fish toxicity****7631-86-9 amorphous silicon dioxide, chemically prepared**

LC50 (96 h)	10000 mg/l (Brachydanio rerio) IUCLID Dataset 18-Feb-2000 OECD TG 203
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LC50	>35 mg/l (Oncorhynchus mykiss) Oker-Chemie MSDS (07/02/2005)
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Water flea toxicity**7631-86-9 amorphous silicon dioxide, chemically prepared**

EC50 (24 h)	> 1000 mg/l (Daphnia magna) IUCLID Dataset 18-Feb-2000 OECD TG 202
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EC50 (48 h)	11.8 mg/l (Daphnia magna) Oker-Chemie MSDS (07/02/2005)
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Algae toxicity**7631-86-9 amorphous silicon dioxide, chemically prepared**

EC50 (72 h)	440 mg/l (Selenastrum capricornutum) IUCLID Dataset 18-Feb-2000 ISO 8692
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Bacterial toxicity**7646-79-9 cobalt chloride**

EC50 (6d)	64 mg/l (sludge) Oker-Chemie MSDS (07/02/2005)
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General notes:

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

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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.

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

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

15 Regulations**Sara****Section 355 (extremely hazardous substances):**

None of the ingredients are listed.

Section 313 (Specific toxic chemical listings):

7646-79-9 | cobalt chloride

TSCA (Toxic Substances Control Act):

All ingredients are listed.

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

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

Chemicals known to cause developmental 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)

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2B

NTP (National Toxicology Program)

None of the ingredients are listed.

TLV (Threshold Limit Value established by ACGIH)

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MAK (German Maximum Workplace Concentration)

None of the ingredients are listed.

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

None of the ingredients are listed.

OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients are listed.

Canadian DSL

All ingredients are listed.

Canadian NDSL

None of the ingredients are listed.

Korea ECL

All ingredients are listed.

European EINECS

All ingredients are listed.

Philippines Inventory of Chemicals and Chemical Substances PICCS

All ingredients are listed.

Inventory of the Existing Chemical Substances manufactured or imported in China IECSC

All ingredients are listed.

Australian Inventory of Chemical Substances AICS

All ingredients are listed.

Existing and New Chemical Substance List ENCS

All ingredients are listed.

Korean Existing Chemical Inventory KECI

7631-86-9	amorphous silicon dioxide, chemically prepared	KE-31032
7646-79-9	cobalt chloride	KE-06095

Product related hazard information:

Observe the general safety regulations when handling chemicals.
The product has been classified and marked in accordance with directives on hazardous materials.

Hazard symbols:

T Toxic

Hazard-determining components of labelling:

cobalt chloride

Risk phrases:

49 May cause cancer by inhalation.

Safety phrases:

53 Avoid exposure - obtain special instructions before use.

20 When using do not eat or drink.

36 Wear suitable protective clothing.

45 In case of accident or if you feel unwell, seek medical advice immediately.

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60 This material and its container must be disposed of as hazardous waste.

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.

Component Hazard Symbols:

T Toxic

N Dangerous for the environment

Component Risk Phrases

22 Harmful if swallowed.

42/43 May cause sensitization by inhalation and skin contact.

49 May cause cancer by inhalation.

50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Department issuing MSDS: GRACE Davison Safety & Health Department**Contact:**

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*** Data compared to the previous version altered.**