

Material Safety Data Sheet

10/17/2006

Reviewed on 10/17/2006

1 Identification of substance**Product details****Trade name:** LUDOX® HS-40 FS**Article number:** 5102677**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)
Other Emergencies (24 hr)Chemtrec 1-800-424-9300
1-410-531-4000**2 Data on components**

CAS No. &	List of Components	
7631-86-9	amorphous silicon dioxide, chemically prepared	
107-21-1	ethylene glycol	Xn; R 22
7732-18-5	water, distilled, or of similar purity	

Additional information: None Applicable**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

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Canadian Hazard Symbol

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WHMIS classification D2A - 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 wash with water and soap and rinse thoroughly.
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 symptoms occur consult doctor.**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:** Wear protective clothing.**Measures for environmental protection:**

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

Measures for cleaning/collecting:

Dispose of the collected material according to regulations.
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

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.

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

Avoid contact with eyes, skin or clothing. Wash thoroughly after handling. Avoid breathing aerosols, mists or dust from dried product. Wash contaminated clothing before reuse. See personal protective equipment.

Information about protection against explosions and fires: The product is not flammable.

Storage:**Requirements to be met by storerooms and receptacles:**

Colloidal silica should be stored above 2 °C. Freezing temperatures can cause irreversible precipitation of the silica, therefore the product should be located in heated buildings. Avoid routine storage temperatures above 43 °C.

Information about storage in one common storage facility: Store away from foodstuffs.

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

107-21-1 ethylene glycol

TLV	Short-term value: C 100 mg/m ³ (H)
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7732-18-5 water, distilled, or of similar purity

PEL	- OSHA TWA: NONE ESTABLISHED
TLV	- ACGIH TWA: NONE ESTABLISHED

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.

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Protection of hands:

Protective gloves

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

Eye protection:

Use chemical safety goggles and/or full face shield where splashing of solutions is possible.



Safety glasses

Body protection: Protective work clothing

9 Physical and chemical properties

General Information

Form:	Liquid
Color:	Clear to Opalescent
Odor:	Odorless

Change in condition

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	100°C (212°F)

Flash point:	Not applicable.
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Auto igniting:	Product is not self-igniting.
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Danger of explosion:	Product does not present an explosion hazard.
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Density:

Specific Gravity at 20°C (68°F)	1.3
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Solubility in / Miscibility with

Water:	Fully miscible.
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pH-value at 20°C (68°F):	9.0 - 10.0
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10 Stability and reactivity

Thermal decomposition / conditions to be avoided:

No decomposition if used according to specifications.

Dangerous reactions No dangerous reactions known.

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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)

107-21-1 ethylene glycol

Oral	LD50	4700 mg/kg (rat) IUCLID Dataset 18-Feb-2000
	LDLo	786 mg/kg (human being)
Dermal	LD50	> 2000 mg/kg (rabbit) IUCLID Dataset 18-Feb-2000

Primary irritant effect:**on the skin:** May cause irritation with dryness and abrasion.**in the eye:** May cause irritation, redness and pain.**Sensitization:** No sensitizing effects known.**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****Ecotoxical 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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107-21-1 ethylene glycol

LC50 (24 h)	5000 mg/l (Carassius auratus) IUCLID Dataset 18-Feb-2000
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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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107-21-1 ethylene glycol

LC50	> 10000 mg/l (Daphnia magna)
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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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107-21-1 ethylene glycol

EC0	> 10000 mg/l (Scenedesmus quadricauda)
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Bacterial toxicity**107-21-1 ethylene glycol**

EC0	> 10000 mg/l (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.

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

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

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* **15 Regulations**

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

None of the ingredients are listed.

Section 313 (Specific toxic chemical listings):

107-21-1 | ethylene glycol

TSCA (Toxic Substances Control Act):

All ingredients are listed.

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

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)

7631-86-9 | amorphous silicon dioxide, chemically prepared

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NTP (National Toxicology Program)

None of the ingredients are listed.

TLV (Threshold Limit Value established by ACGIH)

107-21-1 | ethylene glycol

A4

MAK (German Maximum Workplace Concentration)

7631-86-9 | amorphous silicon dioxide, chemically prepared

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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.

Australian Inventory of Chemical Substances AICS

All ingredients are listed.

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Existing and New Chemical Substance List ENCS

All ingredients are listed.

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.

Component Hazard Symbols: Xn Harmful**Department issuing MSDS:** GRACE Davison Safety & Health Department**Contact:**DAVISON CATALYSTS
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