

MATERIAL SAFETY DATA SHEET

(USA)

(Complies with USA OSHA 29 CFR 1910.1200 and ANSI Z 400.1)

Version: 1

Revision date: 15 July 2004

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

Product code: S100
Product name: 70/140-Mesh Sand S100
Company identification: Schlumberger Technology Corporation
110 Schlumberger Drive
Sugar Land, Texas 77478, USA
Telephone: 1-281-285-7873
Emergency telephone number: USA: 1-281-595-3518

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

ATTENTION

Main physical hazards: No classified physical hazards.
Main health hazards: Respirable dust. CANCER HAZARD. This product may contain small amounts of respirable crystalline silica. Crystalline silica dust is listed by IARC in Group 1 as known to cause lung cancer in humans, if inhaled. Risk of cancer depends on duration and level of exposure.
Main environmental hazards: None.
Other hazards: Dust.
Precautions: Avoid dust formation. Do not breathe dust. Wear suitable protective equipment.
HMIS classification: Health: 0 Flammability: 0 Physical hazard: 0 PPE: E

Form: Solid / Powder **Color:** Tan **Odor:** None

Principle routes of exposure:
Inhalation. Eye contact.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components classified as hazardous:

Component	CAS-No	Weight % - Range
Crystalline silica	14808-60-7	60 - 100

4. FIRST AID MEASURES

Eye contact: Rinse with water.
Skin contact: Rinse with water.
Ingestion: Rinse mouth. Never give anything by mouth to an unconscious person.

Inhalation: Move to fresh air.
Additional first aid remarks: Consult a physician if necessary.

5. FIRE-FIGHTING MEASURES

Fire hazard: Not combustible.
Flash point: Does not flash.
Autoignition temperature: Not applicable.
Flammability limits in air:
Lower: Not applicable
Upper: Not applicable
Oxidizing properties: None.

Suitable extinguishing media:

None needed. The product itself does not burn. Use extinguishing media appropriate for surrounding material.

Extinguishing media which must not be used for safety reasons:

None known.

Special exposure hazards arising from the substance or preparation itself, its combustion products, or released gases:

None.

Special protective equipment for firefighters:

Not applicable.

NFPA rating:

Health:	0
Flammability:	0
Instability:	0
Special:	None

6. ACCIDENTAL RELEASE MEASURES

Main physical hazards: No classified physical hazards.
Other hazards: Dust.
Personal precautions: Do not breathe dust. Wear suitable protective equipment. See also Section 8.
Methods for cleaning up: Shovel into suitable container for disposal. After cleaning, flush away traces with water.
Environmental precautions: None.

7. HANDLING AND STORAGE

Handling:

Precautions: Avoid dust formation. Do not breathe dust. Wear suitable protective equipment.
Safe handling advice: Provide appropriate exhaust ventilation at places where dust is formed.
**Technical measures/
storage conditions:** No special storage conditions required.
Packaging requirements: Paper bag (minimum 3 ply), or other industrial container designed for powders and granulated materials.
Incompatible products: None known.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering measures to reduce exposure:	Enclosure of the process. Wet methods. Other suitable methods.
Hygiene measures:	Keep airborne concentrations below exposure limits. Wear suitable protective equipment. Avoid contact with eyes.
Respiratory protection:	Use NIOSH approved respirator with dust and mist protection (3M 8210). If dust concentration exceeds 5 times the exposure limit, wear an approved HEPA respirator.
Eye protection:	Safety glasses with side-shields.
Hand protection:	Cotton gloves.
Skin and body protection:	No special precautions required.

Occupational Exposure Limits

Component	ACGIH - TLVs			OSHA - PELs	
	TWA / Ceiling	STEL	Skin	TWA / C	STEL
Crystalline silica	0.05 mg/m ³ TWA				

Nuisance dust:ACGIH: inhalable particulate TLV-TWA=10 mg/m³; respirable particulate TLV-TWA= 3 mg/m³**9. PHYSICAL AND CHEMICAL PROPERTIES**

Chemical characterization:	Inert. (Inorganic).
Fire hazard:	Not combustible.
Form:	Solid / Powder
Color:	Tan
Odor:	None
Odor threshold:	Not applicable.
pH:	Not applicable.
Boiling point/range:	Not applicable.
Flash point:	Does not flash.
Flammability limits in air:	
Lower:	Not applicable
Upper:	Not applicable
Bulk density:	1100 - 1600 kg/m ³
Melting point/range:	Not applicable.
Decomposition temperature:	Not applicable.
Solubility:	
Water solubility:	Insoluble.
Fat solubility:	Insoluble
Partition coefficient (n-octanol/water):	Not applicable.
Relative density:	2.6 (@ 20°C)
Vapor pressure:	Not applicable.
Vapor density:	Not applicable.
Viscosity:	Not applicable.
Evaporation rate:	Not applicable.
% Volatile:	None.

10. STABILITY AND REACTIVITY**Stability:**

Stable.

Conditions to avoid:

None known.

Incompatibility with other substances:

None known.

Hazardous decomposition products:

None.

Hazardous polymerization:

None.

11. TOXICOLOGICAL INFORMATION**PRODUCT TOXICOLOGICAL INFORMATION****Acute Health Hazard**

Eye contact:	May cause mechanical irritation.
Skin contact:	No effect expected.
Ingestion:	Accidental ingestion of small amounts is not expected to cause adverse effects.
Inhalation:	Inhalation of dust may cause shortness of breath, tightness of the chest, a sore throat and cough. This product may contain small amounts of respirable crystalline silica. Repeated or prolonged inhalation of crystalline silica dust can cause delayed lung injury, and other diseases, including silicosis and lung cancer.
Sensitization - lung:	None.
Sensitization - skin:	None.

Chronic Health Hazard

Carcinogenic effects:	Crystalline silica dust is listed by IARC in Group 1 as known to cause lung cancer in humans, if inhaled. Risk of cancer depends on duration and level of exposure.
Mutagenic effects:	None.
Teratogenic effects:	None.
Reproductive toxicity:	None.
Target organ effects:	Silicosis. Lung cancer.

COMPONENT TOXICOLOGICAL INFORMATION

Component	Target Organ Effects	LD50 / LC50
Crystalline silica	eyes, respiratory system	

Component	IARC:	ACGIH - Carcinogens:	OSHA - Regulated Carcinogens:	NTP:
Crystalline silica	Group 1; Monograph 68, 1997 (inhaled in the form of quartz or cristobalite from occupational sources)	A2 - Suspected Human Carcinogen		Known Carcinogen

12. ECOLOGICAL INFORMATION

PRODUCT INFORMATION**Main environmental hazards:**

None.

Persistence / Degradability:

Not applicable.

Bioaccumulation potential:

None.

Aquatic toxicity:

This product has no known eco-toxicological effects.

Ecotoxicity effects:

None.

COMPONENT INFORMATION

Crystalline silica

Bioaccumulation: Does not bioaccumulate**Persistence / degradability:** The methods for determining biodegradability are not applicable to inorganic substances.**13. DISPOSAL CONSIDERATIONS**

Waste from residues / unused products:

Dispose of by sanitary landfilling or other acceptable method in accordance with local regulations.

Contaminated packaging:

Dispose of in accordance with local regulations.

EPA RCRA Hazardous Waste Code:

None

14. TRANSPORT INFORMATION

DOT:**CERCLA RQ:** None**Hazard class:** Not regulated.**Proper shipping name:** Not regulated.**Label(s):** None required.**IMDG/IMO****Shipping name:** Not regulated.

UN number: None

ICAO/IATA

Shipping name: Not regulated.

UN number: None

TDG (Canada):

Shipping name: Not regulated.

PIN: None

Note 1:

For the applicable placard selection refer to the appropriate transport regulations; the selection may vary depending on the cargo size and categories of other hazardous materials in the cargo.

15. REGULATORY INFORMATION**International chemical inventories**

Inventory - United States TSCA - This product complies with TSCA requirements.
Canada DSL Inventory List - This product complies with DSL requirements.
EU EINECS/ELINCS - This product complies with EINECS/ELINCS requirements.
China inventory of existing chemical substances list - This product complies with China inventory requirements.
Inventory - Japan - Existing and New Chemicals list - Australia (AICS): This product does not comply with JPENCS
All the constituents of this material are listed on the Australian Inventory of Chemical Substances (AICS).

U.S.A. regulations

OSHA Hazard Communication Standard:
(Complies with USA OSHA 29 CFR 1910.1200 and ANSI Z 400.1)

EPA RCRA Hazardous Waste Code:
None

EPA, Sections 311 and 312 - Material Safety Data Sheet Requirements (40 CFR 370):

Immediate (Acute) Health Hazard:	None
Delayed (Chronic) Health Hazard:	YES
Fire Hazard:	None
Sudden Release or Pressure Hazard:	None
Reactive Hazard:	None

EPA, Sections 313 - List of Toxic Chemicals (40 CFR 372):
This product contains the following substance(s), which appear(s) on the List of Toxic Chemicals:

Additional Regulatory Information

Crystalline silica

EPA, CERCLA Section 102a/103 Hazardous Substances (40 CFR 302.4): None
CERCLA/SARA - Hazardous Substances and their RQs: None
EPA, SARA TITLE III Section 304, Extremely Hazardous Substances (40 CFR 355.40): None
California Proposition 65: carcinogen (airborne particles of respirable size); initial date 10/1/88

WHMIS Hazard Class:
D2A (Other Toxic Effects - Very Toxic Material)

16. OTHER INFORMATION

Current references:

1. Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices. *American Conference of Governmental Industrial Hygienists, Cincinnati OH.*
2. IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Man. *World Health Organization, International Agency for Research on Cancer. Geneva, Switzerland.*
3. Annual Report on Carcinogens. National Toxicology Program. *U.S. Department of Health and Human Services, Public Health Service.*
4. NIOSH Registry of Toxic Effects of Chemical Substances (RTECS). *National Institute for Occupational safety and Health. Cincinnati, OH.*
5. LOLI Database.

Explanation of terms:

ACGIH:	American Conference of Governmental Industrial Hygienist
ACGIH-TL:	Threshold Limit Value
DSL:	Domestic Substance List
HMIRC:	Hazardous Materials Information Review Commission
IARC:	International Agency for Research on Cancer
NTP:	National Toxicology Program
NIOSH:	National Institute of Occupational Safety & Health
NIOSH-REL:	Recommended Exposure Limit
OSHA	Occupational Safety & Health Administration
OSHA-PEL:	Permissible Exposure Limit
TSCA:	Toxic Substance Control Act (Inventory)

Occupational Exposure Limits indicators: TWA - Time Weighted Average; STEL - Short Term Limit; C - Ceiling Limit; units: [mg/m³]

ACGIH Notations:

"Skin" refers to the potential significant contribution to the overall exposure by the cutaneous route, including mucous membranes and the eyes, either by contact with vapors or by direct skin contact with the substance.

"A" notation indicates carcinogenicity as follows:

ACGIH classification: A1 - Confirmed Human Carcinogen; A2 - Suspected Human Carcinogen; A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans; A4 - Not Classifiable as a Human Carcinogen; A5 - Not suspected as a Human Carcinogen.

"SEN" refers to the potential for an agent to product sensitization as confirmed by human and animal data.

Section(s) revised: MSDS fully updated in the new database.

Additional advice: Consult your supplier if the material is to be used for special applications such as in the food industry or for hygiene, medical or surgical end-use.

Prepared by: Well Services Safety & Environment

Revision date: 15 July 2004

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End of the Material Safety Data Sheet