

SDS no. PID11307  
Version 16  
Revision date 23/Aug/2017  
Supersedes date 04/Aug/2017



## Safety Data Sheet M-I-X\* II (All Grades)

### 1. Identification

#### 1.1 Product identifier

**Product name** M-I-X\* II (All Grades)  
**Product code** PID11307

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

**Recommended Use** Lost circulation material.  
**Uses advised against** Consumer use

#### 1.3 Details of the supplier of the safety data sheet

**Supplier**  
**M-I L.L.C.**  
P.O.Box 42842  
Houston, TX 77242  
www.miswaco.slb.com  
Telephone: 1 281-561-1511

**M-I SWACO, A Schlumberger Company**  
200 - 125, 9th Avenue SE  
Calgary, Alberta T2G 0P6, Canada  
Telephone: 1-780-962-8221

**M-I SWACO DO BRASIL COMÉRCIO SERVIÇOS E MINERAÇÃO LTDA**  
Avenida Presidente Wilson, nº 231, 20º andar,  
Centro, Rio de Janeiro. CEP: 20.030-021  
Telephone Number: +55 21 3824-6923

**E-mail address** sdsmi@slb.com

**Prepared by**  
Global Regulatory Compliance - Chemicals (GRC - Chemicals)

#### 1.4 Emergency Telephone Number

**Emergency telephone** (24 Hour) Asia Pacific +65 3158 1074, Europe +44 (0) 1235 239 670, Middle East and Africa +44 (0) 1235 239 671, USA +1 281 561 1600, Canada +1 800 579 7421, Argentina: +54 11 5984 3690, Brazil : 0800-720-8000/0800-777-2323 (WGRA)

### 2. Hazards identification

#### 2.1 Classification of the substance or mixture

**GHS - Classification**

**Health hazards**

Carcinogenicity	Category 1A
Specific target organ toxicity - Repeated exposure	Category 2

**Environmental hazards** Not classified

**Physical Hazards**

Combustible dust
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**2.2 Label elements**



**Signal word**

DANGER

**Hazard statements**

H350i - May cause cancer by inhalation

H373 - May cause damage to organs through prolonged or repeated exposure if inhaled

H232 - May form combustible dust concentrations in air

**Precautionary statements**

P201 - Obtain special instructions before use

P202 - Do not handle until all safety precautions have been read and understood

P260 - Do not breathe dust/fume/gas/mist/vapors/spray

P264 - Wash face, hands and any exposed skin thoroughly after handling

P270 - Do not eat, drink or smoke when using this product

P281 - Use personal protective equipment as required

P240 - Ground/bond container and receiving equipment

P241 - Use explosion-proof electrical/ ventilating/ lighting/ equipment

P243 - Take precautionary measures against static discharge

P308 + P313 - IF exposed or concerned: Get medical advice/attention

P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable

**Hazards not otherwise classified**

None known

**Unknown acute toxicity** Not applicable.

**3. Composition/information on Ingredients**

**3.1 Substances**

Chemical Name	CAS No	Weight-%	Regulation (EC) No 1272/2008
Cellulose fibre	Proprietary	60-100	Not classified
Crystalline silica (impurity)	14808-60-7	<2	STOT Rep. 2 - H373

**3.2 Mixtures**

Not applicable

**Comments**

Proprietary component(s) in section 3 of this SDS does not/do not trigger application of trade secret exemption under Hazardous Materials Information Review Act (HMIRA). The proprietary component in this product contributes to combustible dust classification.

**4. First aid measures**

**4.1 First aid measures**

<b>Inhalation</b>	If inhaled, remove from area to fresh air. Get medical attention if respiratory irritation develops or if breathing becomes difficult.
<b>Ingestion</b>	Rinse mouth. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Get medical attention if symptoms occur.
<b>Skin contact</b>	Wash skin thoroughly after handling. Get medical attention immediately if symptoms occur.
<b>Eye Contact</b>	Promptly wash eyes with lots of water while lifting eye lids. Remove contact lenses, if worn. Get medical attention if any discomfort continues.

**4.2. Most important symptoms and effects, both acute and delayed**

**General advice** The severity of the symptoms described will vary dependant of the concentration and the length of exposure. If adverse symptoms develop, the casualty should be transferred to hospital as soon as possible.

**Symptoms**

<b>Inhalation</b>	Please see Section 11. Toxicological Information for further information.
<b>Ingestion</b>	Please see Section 11. Toxicological Information for further information.
<b>Skin contact</b>	Please see Section 11. Toxicological Information for further information.
<b>Eye contact</b>	Please see Section 11. Toxicological Information for further information.

**4.3 Indication of any immediate medical attention and special treatment needed**

**Notes to physician** Treat symptomatically

**5. Fire-fighting measures**

**5.1 Extinguishing media**

**Suitable extinguishing media**  
Water Fog, Alcohol Foam, CO<sub>2</sub>, Dry Chemical.

**Extinguishing media which must not be used for safety reasons**  
None known.

**5.2. Special hazards arising from the substance or mixture**

**Unusual fire and explosion hazards**  
Suspended dust may present a dust explosion hazard.

**5.3 Advice for firefighters**

**Special protective equipment for fire-fighters**  
As in any fire, wear self-contained breathing apparatus and full protective gear.

**Special Fire-Fighting Procedures**

Containers close to fire should be removed immediately or cooled with water.

**6. Accidental release measures**

**6.1. Personal precautions, protective equipment and emergency procedures**

Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Use personal protective equipment. See also section 8. If spilled, take caution, as material can cause surfaces to become very slippery.

**6.2 Environmental precautions**

The product should not be allowed to enter drains, water courses or the soil.

**Environmental exposure controls**

Avoid release to the environment. Local authorities should be advised if significant spillages cannot be contained.

**6.3 Methods and material for containment and cleaning up**

**Methods for containment**

Prevent further leakage or spillage if safe to do so. Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry.

**Methods for cleaning up**

Shovel into suitable container for disposal. Take precautionary measures against static discharges. Avoid dust formation. Powdered material may form explosive dust-air mixtures.

**6.4 Reference to other sections**

See section 13 for more information.

**7. Handling and storage**

**7.1 Precautions for safe handling**

**Handling**

Do not handle until all safety precautions have been read and understood. Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin and eyes. Avoid dust formation. Take precautionary measures against static discharges. Keep away from heat, sparks and open flame. No smoking. Avoid breathing dust; if exposed to high dust concentration, leave area immediately. Fine dust dispersed in air may ignite.

**7.2 Conditions for safe storage, including any incompatibilities**

**Technical measures/precautions** Ensure adequate ventilation. Keep airborne concentrations below exposure limits.

**Storage precautions** Keep containers tightly closed in a dry, cool and well-ventilated place. Avoid heat, flames and other sources of ignition. Protect from moisture. Avoid contact with: Oxidizing agents

**Packaging materials** Use specially constructed containers only.

**8. Exposure controls/personal protection**

**8.1 Control parameters**

Chemical Name	ACGIH TLV	OSHA PEL	Argentina - Occupational Exposure Limits - TWAs (CMPs)	Brazil - Occupational Exposure Limits - TWAs (LTs)	Mexico - Occupational Exposure Limits - TWAs (LMPE-PPTs)
Cellulose fibre	10 mg/m <sup>3</sup>	15 mg/m <sup>3</sup> TWA 5 mg/m <sup>3</sup> TWA	10 mg/m <sup>3</sup> TWA	Not determined	10 mg/m <sup>3</sup> TWA VLE-PPT
Crystalline silica (impurity)	0.025 mg/m <sup>3</sup>	50 µg/m <sup>3</sup> TWA	0.05 mg/m <sup>3</sup> TWA	Not determined	0.1 mg/m <sup>3</sup> TWA

		respirable fraction			VLE-PPT (respirable fraction)
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Crystalline silica (impurity)  
OSHA - Final PELs - Table Z-3 Mineral Dusts  
(250)/(%SiO<sub>2</sub> + 5) mppcf TWA, respirable fraction; (10)/(%SiO<sub>2</sub> + 2) mg/m<sup>3</sup> TWA, respirable fraction

**IDLH (Immediately Dangerous to Life or Health)**

Immediately Dangerous to Life or Health (IDLH) is established by the US National Institute for Occupational Safety and Health (NIOSH). The purpose of establishing an IDLH value is to ensure that the worker can escape from a given contaminated environment in the event of failure of the most protective respiratory protection equipment. In the event of failure of respiratory protection equipment every effort should be made to exit immediately.

Chemical Name	IDLH (Immediately Dangerous to Life or Health)
Cellulose fibre	Not determined
Crystalline silica (impurity) 14808-60-7	50 mg/m <sup>3</sup> IDLH (respirable dust)

**8.2 Exposure controls**

A risk assessment is recommended to be performed by a qualified and trained personnel to analyze the worksite and recommends the appropriate controls such as engineering controls, work practice controls, and administrative controls as primary means of reducing employee exposure. When there is a remaining hazards after applying the primary controls, Personal Protective Equipment (PPE) must be used.

All chemical Personal Protective Equipment (PPE) should be selected based on an assessment of both the chemical hazard present and the risk of exposure to those hazards. The PPE recommendations below are based on an assessment of the chemical hazards associated with this product. Where this product is used in a mixture with other products or fluids, additional hazards may be created and as such further assessment of risk may be required. The risk of exposure and need of respiratory protection will vary from workplace to workplace and should be assessed by the user in each situation.

**Engineering Controls**

Ensure adequate ventilation. Mechanical ventilation or local exhaust ventilation is required. Keep airborne concentrations below exposure limits. Apply technical measures to comply with the occupational exposure limits.

**Personal protective equipment**

- Eye protection** Safety glasses with side-shields. Tightly fitting safety goggles.
- Hand protection** Repeated or prolonged contact Use protective gloves made of: Nitrile Neoprene Frequent change is advisable
- Respiratory Protection** All respiratory protection equipment should be used within a comprehensive respiratory protection program that meets the requirements of 29 CFR 1910.134 (U.S. OSHA Respiratory Protection Standard) or local equivalent.If exposed to airborne particles of this product use at least a NIOSH-approved N95 half-mask disposable or re-useable particulate respirator. In work environments containing oil mist/aerosol use at least a NIOSH-approved P95 half-mask disposable or re-useable particulate respirator.
- Skin and body protection** Wear suitable protective clothing, Eye wash and emergency shower must be available at the work place.
- Hygiene Measures** Wash hands before eating, drinking or smoking, Remove and wash contaminated clothing before re-use.

**9. Physical and chemical properties**

**9.1 Information on basic physical and chemical properties**

- Physical state** Solid
- Appearance** Powder Dust
- Color** Tan

<b>Odor</b>	Slight	
<b>Odor threshold</b>	Not applicable	
<b>Property</b>	<b>Values</b>	<b>Remarks</b>
pH	No information available	
pH @ dilution		
Melting / freezing point	No information available	
Boiling point/range	No information available	
Flash point	No information available	
Evaporation rate (BuAc =1)	No information available	
Flammability (solid, gas)	Not applicable	
Flammability Limit in Air		
Upper flammability limit	No information available	
Lower flammability limit	No information available	
Vapor pressure	No information available	
Vapor density	No information available	
Specific gravity	1.4 - 1.65	20 °C
Bulk density	352-513 kg/m <sup>3</sup> / 22-32 lb/ft <sup>3</sup>	
Water solubility	Insoluble in water	
Solubility in other solvents	No information available	
Autoignition temperature	No information available	
Decomposition temperature	No information available	
Kinematic viscosity	No information available	
Dynamic viscosity	No information available	
log Pow	No information available	
<b>Explosive properties</b>	Suspended dust may present a dust explosion hazard	
<b>Oxidizing properties</b>	No information available	

**9.2 Other information**

<b>Pour point</b>	No information available
<b>Molecular weight</b>	No information available
<b>VOC content(%)</b>	None
<b>Density</b>	No information available

**Comments**

The data listed above are typical physical and chemical properties and should not be construed as product specification.

**10. Stability and reactivity**

**10.1 Reactivity**

Dust may form explosive mixture in air.

**10.2 Chemical stability**

Stable under normal temperature conditions and recommended use.

**10.3 Possibility of Hazardous Reactions**

**Hazardous polymerization**

Hazardous polymerization does not occur.

**10.4 Conditions to avoid**

Avoid heat, flames and other sources of ignition. Avoid dust formation. Protect from moisture.

**10.5 Incompatible materials**

Oxidizing agents.

**10.6 Hazardous decomposition products**

See Section 5.2.

## 11. Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

##### Inhalation

Inhalation of dust in high concentration may cause irritation of respiratory system. Repeated or prolonged inhalation of crystalline silica dust can cause delayed lung injury, and other diseases, including silicosis and lung cancer.

##### Eye contact

Dust may cause mechanical irritation.

##### Skin contact

Prolonged contact may cause redness and irritation.

##### Ingestion

Ingestion may cause stomach discomfort.

#### Toxicology data for the components

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Cellulose fibre	> 5 g/kg ( Rat )	> 2 g/kg ( Rabbit )	> 5800 mg/m <sup>3</sup> ( Rat ) 4 h
Crystalline silica (impurity)	= 500 mg/kg ( Rat )	No data available	No data available

Chemical Name	IARC Group 1 or 2	ACGIH - Carcinogens	OSHA listed carcinogens	NTP
Cellulose fibre	No data available	No data available	No data available	Known Human Carcinogen
Crystalline silica (impurity)	Group 1; Monograph 100C [2012] Monograph 100C [2012] (listed under Crystalline silica inhaled in the form of quartz or cristobalite from occupational sources); Monograph 68 [1997] Group 1; Monograph 68 [1997]	A2 Suspected Human Carcinogen	Present	Known Human Carcinogen

#### Sensitization

This product does not contain any components suspected to be sensitizing.

#### Mutagenic effects

This product does not contain any known or suspected mutagens.

#### Carcinogenicity

Contains a known or suspected carcinogen.

#### Reproductive toxicity

This product does not contain any known or suspected reproductive hazards.

#### Developmental toxicity

Not known to cause birth defects or have a deleterious effect on a developing fetus.

#### Routes of exposure

Inhalation.

#### Routes of entry

Inhalation.

#### Specific target organ toxicity - Single exposure

Not classified

#### Specific target organ toxicity - Repeated exposure

Category 2.

#### Target organ effects

Lungs.

#### Aspiration hazard

Not applicable.

## 12. Ecological information

### 12.1 Toxicity

#### **Toxicity to algae**

This product is not considered toxic to algae.

#### **Toxicity to fish**

This product is not considered toxic to fish.

#### **Toxicity to daphnia and other aquatic invertebrates**

This product is not considered toxic to invertebrates.

Chemical Name	Toxicity to fish	Toxicity to algae	Toxicity to daphnia and other aquatic invertebrates
Cellulose fibre	No information available	No information available	No information available
Crystalline silica (impurity)	No information available	No information available	No information available

### 12.2 Persistence and degradability

Readily biodegradable.

### 12.3 Bioaccumulative potential

Does not bioaccumulate.

### 12.4 Mobility in soil

Insoluble in water.

### 12.5 Results of PBT and vPvB assessment

This preparation contains no substance considered to be persistent, bioaccumulating nor toxic (PBT)  
This preparation contains no substance considered to be very persistent nor very bioaccumulating (vPvB)

### 12.6 Other adverse effects.

None known.

## 13. Disposal considerations

### 13.1 Waste treatment methods

<b>Disposal Method</b>	Disposal should be made in accordance with federal, state and local regulations.
<b>Waste from residues / unused products</b>	Dispose of in accordance with local regulations.
<b>Contaminated packaging</b>	Empty containers should be taken for local recycling, recovery or waste disposal.

## 14. Transport information

### 14.1. UN number UN No. (DOT)

Not regulated



<b>UN No. (MT/ANTT)</b>	Not regulated
<b>UN No. (TDG)</b>	Not regulated
<b>UN/ID No. (ADR/RID/ADN/ADG)</b>	Not regulated
<b>UN No. (IMDG/ANTAQ)</b>	Not regulated
<b>UN No. (ICAO/ANAC)</b>	Not regulated

**14.2. UN proper shipping name**

The product is not covered by international regulation on the transport of dangerous goods

**14.3 Hazard class(es)**

<b>DOT Hazard class</b>	Not regulated
<b>ANTT Hazard class</b>	Not regulated
<b>TDG Hazard class</b>	Not regulated
<b>ADR/RID/ADN/ADG Hazard class</b>	Not regulated
<b>IMDG/ANTAQ Hazard class</b>	Not regulated
<b>ICAO/ANAC Hazard class/division</b>	Not regulated

**14.4 Packing group**

<b>DOT/ANTT Packing group</b>	Not regulated
<b>ANTT Packing group</b>	Not regulated
<b>TDG Packing group</b>	Not regulated
<b>ADR/RID/ADN/ADG Packing group</b>	Not regulated
<b>IMDG/ANTAQ Packing group</b>	Not regulated
<b>ICAO/ANAC Packing group</b>	Not regulated

**14.5 Environmental hazard**

No

**14.6 Special precautions**

Not applicable

**14.7 Transport in bulk according to Annex I/II of MARPOL 73/78 and the IBC Code**

Please contact MISDS@slb.com for info regarding transport in Bulk.

**15. Regulatory information**

**International inventories**

<b>USA (TSCA)</b>	Complies
<b>Canada (DSL)</b>	Complies
<b>Philippines (PICCS)</b>	Complies
<b>Japan (ENCS)</b>	Complies
<b>China (IECSC)</b>	Complies
<b>Australia (AICS)</b>	Complies
<b>Korean (KECL)</b>	Complies
<b>New Zealand (NZIoC)</b>	Complies

**Europe - REACH**

Contact REACH@slb.com for REACH information.

**U.S. Federal and State Regulations**

**SARA 311/312 Hazard Categories**

Delayed (chronic) health hazard. Fire Hazard (Combustible Dust)

Chemical Name	SARA 302 / TPQs	SARA 313	CERCLA RQ
Cellulose fibre	N/A	N/A	N/A
Crystalline silica (impurity)	N/A	N/A	N/A

**State Comments**

Proposition 65: This product contains chemical(s) considered by the State of California's Safe Drinking Water and Toxic Enforcement Act of 1986 to cause cancer and/or reproductive toxicity.

**Crystalline silica (impurity)**

Carcinogen

**Canadian Classification**

This Safety Data Sheet has been prepared in compliance with the Hazardous Products Regulations.

**Brazilian Regulations**

**Brazil Regulation**

This SDS was prepared in accordance with Brazil law NBR 14725.

**Federal Police**

Not determined

**Army**

Not determined

**ANVISA**

Not determined

**16. Other information**

**Supersedes date** 04/Aug/2017

**Revision date** 23/Aug/2017

**Version** 16

**This SDS has been revised in the following section(s)**

2. Hazards Identification  
Updated according to WHMIS 2015.  
This SDS was prepared in accordance with Brazil law NBR 14725.  
Globally Harmonized System (GHS)

**HMIS classification**

Health	1*
Flammability	1
Physical hazard	0
PPE	E

N/A - Not Applicable, N/D - Not Determined.

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