

## Safety Data Sheet OPTISEAL III

### 1. Identification of the substance/preparation and of the Company/undertaking

#### 1.1 Product identifier

Product name OPTISEAL III  
Product code 12953

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

Recommended Use Drilling fluid additive  
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

#### Prepared by

Global Chemical Regulatory Compliance (GCRC), Mike McDowell

#### 1.4 Emergency Telephone Number

Emergency telephone (24 Hour) Australia +61 2801 44558, Asia Pacific +65 3158 1074, China +86 10 5100 3039, Europe +44 (0) 1235 239 670, Middle East and Africa +44 (0) 1235 239 671, New Zealand +64 9929 1483, USA 001 281 561 1600  
Telephone Number - 281-561-1511

### 2. Hazards identification

#### 2.1 Classification of the substance or mixture

##### GHS - Classification

##### Health hazards

Carcinogenicity	Category 1A
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Environmental hazards Not classified

##### Physical Hazards

Combustible dust
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#### 2.2 Label elements

**Signal word**

DANGER

**Hazard statements**

H350 - May cause cancer

May form combustible dust concentrations in air

**Precautionary statements**

P201 - Obtain special instructions before use

P281 - Use personal protective equipment as required

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

**Supplementary precautionary statements**

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

P501 - Dispose of contents/ container to an approved waste disposal plant

P240 - Ground/bond container and receiving equipment

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

P243 - Take precautionary measures against static discharge

### 3. Composition/information on Ingredients

**3.1 Substances**

Not Applicable

**3.2 Mixtures**

Component	CAS-No	Weight % - range
Carbon	7440-44-0	30 - 60
Cellulose	9004-34-6	10 - 30
Graphite	7782-42-5	1 - 5
Silica, crystalline, quartz	14808-60-7	1 - 5

**Comments**

The product contains other ingredients which do not contribute to the overall classification.

### 4. First aid measures

**4.1 Description of first-aid measures****Inhalation**

Move to fresh air. If breathing is difficult, (trained personnel should) give oxygen. Get medical attention immediately if symptoms occur.

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<b>Ingestion</b>	Drink 1 or 2 glasses of water. Never give anything by mouth to an unconscious person. Get medical attention if symptoms occur.
<b>Skin contact</b>	Wash skin thoroughly with soap and water. Remove contaminated clothing and launder before reuse. Get medical attention if irritation persists.
<b>Eye contact</b>	Promptly wash eyes with lots of water while lifting eye lids. Remove contact lenses. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues.

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

##### **Main 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**

<b>Notes to physician</b>	Treat symptomatically
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### **5. Fire-fighting measures**

#### **5.1 Extinguishing media**

##### **Suitable extinguishing media**

Water Fog, Alcohol Foam, CO<sub>2</sub>, Dry Chemical.

##### **Extinguishing media which shall not be used for safety reasons**

None known.

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

##### **Unusual fire and explosion hazards**

Dusts or fumes may form explosive mixtures in air.

##### **Hazardous combustion products**

Silicon oxide, Nitrogen oxides (NO<sub>x</sub>), Carbon oxides (CO<sub>x</sub>).

#### **5.3 Advice for firefighters**

##### **Special protective equipment for fire-fighters**

As in any fire, wear self-contained breathing apparatus and full protective gear.

### **6. Accidental release measures**

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

Wear suitable protective equipment. Evacuate personnel to safe areas. Prevent further leakage or spillage if safe to do so. Avoid dust formation.

#### **6.2 Environmental precautions**

Do not allow material to contaminate ground water system.

**Environmental exposure controls**

No information available.

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

Cover powder spill with plastic sheet or tarp to minimize spreading.

**Methods for cleaning up**

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

**6.4 Reference to other sections**

No information available.

**7. Handling and storage****7.1 Precautions for safe handling****Handling**

Avoid breathing dust; if exposed to high dust concentration, leave area immediately. Avoid contact with skin, eyes and clothing.

**7.2 Conditions for safe storage, including any incompatibilities****Technical measures/precautions** Ensure adequate ventilation.**Storage precautions** Protect from moisture**8. Exposure controls/personal protection****8.1 Control parameters****Component Information**

Component	ACGIH TLV	OSHA PEL
Carbon	Not Determined	Not Determined
Cellulose	10 mg/m <sup>3</sup>	15 mg/m <sup>3</sup> (Total); 5 mg/m <sup>3</sup> (Respirable)
Graphite	2 mg/m <sup>3</sup> (respirable fraction) (all forms except graphite fibers)	15 mppcf, Table Z-3
Silica, crystalline, quartz	0.025 mg/m <sup>3</sup>	see Table Z-3

Graphite

OSHA - Final PELs - Table Z-3 Mineral Dusts

15 mppcf TWA (natural)

Silica, crystalline, quartz

OSHA - Final PELs - Table Z-3 Mineral Dusts

(30)/(%SiO<sub>2</sub> + 2) mg/m<sup>3</sup> TWA, total dust; (250)/(%SiO<sub>2</sub> + 5) mppcf TWA, respirable fraction; (10)/(%SiO<sub>2</sub> + 2) mg/m<sup>3</sup> TWA, respirable fraction**8.2 Exposure controls**

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 measures to reduce exposure**

Ensure adequate ventilation, especially in confined areas.

**Personal protective equipment**

<b>Eye protection</b>	Tightly fitting safety goggles.
<b>Hand protection</b>	Neoprene, Nitrile.
<b>Respiratory protection</b>	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 mist/aerosol of this product, use at least a NIOSH-approved N95 half-mask disposable or re-usable particulate respirator. In work environments containing oil mist/aerosol, use at least a NIOSH-approved P95 half-mask disposable or reuseable particulate respirator.
	If exposed to vapors from this product use a NIOSH/MSHA-approved respirator with an Organic Vapor cartridge.

<b>9. Physical and chemical properties</b>
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**9.1 Information on basic physical and chemical properties**

<b>Physical state</b>	Solid
<b>Appearance</b>	Opaque
<b>Odor</b>	Mild
<b>Color</b>	Gray - Brown
<b>Odor threshold</b>	Not applicable

<b><u>Property</u></b>	<b><u>Values</u></b>	<b><u>Remarks</u></b>
<b>pH</b>	Not applicable	
<b>pH @ dilution</b>		
<b>Melting/freezing point</b>		
<b>Boiling point/range</b>	No information available	
<b>Flash point</b>	No information available	
<b>Evaporation rate (BuAc =1)</b>	No information available	
<b>Flammability (solid, gas)</b>	Not Applicable	
<b>Flammability Limits in Air</b>		
<b>Upper flammability limit</b>	No information available	
<b>Lower flammability limit</b>	No information available	
<b>Vapor pressure</b>	No information available	
<b>Vapor density</b>	No information available	
<b>Specific gravity</b>	2.18	
<b>Bulk density</b>	No information available	
<b>Relative density</b>	No information available	
<b>Water solubility</b>	Negligible	
<b>Solubility in other solvents</b>	No information available	
<b>Autoignition temperature</b>	No information available	
<b>Decomposition temperature</b>	No information available	
<b>Kinematic viscosity</b>	No information available	
<b>Dynamic viscosity</b>	No information available	
<b>Log Pow</b>	No information available	
<b>Explosive properties</b>	No information available	
<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>	No information available
<b>Density</b>	No information available

## 10. Stability and reactivity

### 10.1 Reactivity

No specific reactivity hazards associated with this product.

### 10.2 Chemical stability

Stable. Hazardous polymerization does not occur.

### 10.3 Possibility of Hazardous Reactions

#### **Hazardous polymerization**

Hazardous polymerization does not occur.

#### **Hazardous Reactions**

None known.

### 10.4 Conditions to avoid

None known.

### 10.5 Incompatible materials

Strong oxidizing agents.

### 10.6 Hazardous decomposition products

Silicon oxide. Carbon oxides (COx). Nitrogen oxides (NOx).

## 11. Toxicological information

### 11.1 Information on toxicological effects

#### **Acute toxicity**

<b>Inhalation</b>	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.
<b>Eye contact</b>	Dust contact with the eyes can lead to mechanical irritation.
<b>Skin contact</b>	Repeated exposure may cause skin dryness or cracking.
<b>Ingestion</b>	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
<b>Acute toxicity</b>	0% of the mixture consists of ingredient(s) of unknown toxicity.

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Carbon	> 10000 mg/kg ( Rat )	No data available	No data available
Cellulose	> 5 g/kg ( Rat )	> 2 g/kg ( Rabbit )	> 5800 mg/m <sup>3</sup> ( Rat ) 4 h
Graphite	No data available	No data available	No data available
Silica, crystalline, quartz	= 500 mg/kg ( Rat )	No data available	No data available

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

<b>Mutagenic effects</b>	No evidence of mutagenic properties.
<b>Carcinogenicity</b>	Contains a known or suspected carcinogen. Crystalline silica dust is listed by IARC in Group 1 as known to cause lung cancer in humans, if inhaled.
<b>Reproductive toxicity</b>	No evidence of toxicity to reproduction.
<b>Developmental toxicity</b>	Not known to cause birth defects or have a deleterious effect on a developing fetus.
<b>Routes of exposure</b>	Skin contact. Inhalation. Eye contact.
<b>Routes of entry</b>	Inhalation.
<b>Specific target organ toxicity (single exposure)</b>	Not classified
<b>Specific target organ toxicity (repeated exposure)</b>	Not classified.
<b>Aspiration hazard</b>	Not Applicable.

## 12. Ecological information

### 12.1 Toxicity

#### **Toxicity to algae**

See component information below.

#### **Toxicity to fish**

See component information below.

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

See component information below.

Component	Toxicity to fish	Toxicity to algae	Toxicity to daphnia and other aquatic invertebrates
Carbon 7440-44-0 ( 30 - 60 )	No information available	No information available	No information available
Cellulose 9004-34-6 ( 10 - 30 )	No information available	No information available	No information available
Graphite 7782-42-5 ( 1 - 5 )	No information available	No information available	No information available
Silica, crystalline, quartz 14808-60-7 ( 1 - 5 )	No information available	No information available	No information available

### 12.2 Persistence and degradability

No product level data available.

### 12.3 Bioaccumulative potential

No product level data available.

### 12.4 Mobility in soil

No information available.

### 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**

**Disposal Method** Disposal should be made in accordance with federal, state and local regulations.  
**Contaminated packaging** Empty containers should be taken for local recycling, recovery or waste disposal.

## 14. Transport information

**14.1 UN Number**

<b>UN/ID No. (ADR/RID/ADN/ADG)</b>	Not regulated
<b>UN No. (IMDG)</b>	Not regulated
<b>UN No. (ICAO)</b>	Not regulated
<b>UN No. (DOT)</b>	Not regulated

**14.2 Proper shipping name**

Not regulated for transportation by DOT, TDG, IMDG and ICAO/IATA.

**14.3 Hazard class(es)**

<b>ADR/RID/ADN Hazard class</b>	Not regulated
<b>IMDG Hazard class</b>	Not regulated
<b>ICAO Hazard class/division</b>	Not regulated
<b>DOT Hazard class</b>	Not regulated

**14.4 Packing group**

<b>ADR/RID/ADN Packing Group</b>	Not regulated
<b>IMDG Packing group</b>	Not regulated
<b>ICAO Packing group</b>	Not regulated
<b>DOT Packing group</b>	Not regulated

**14.5 Environmental hazard**

No

**14.6 Special precautions**

Not Applicable

**Brazil**

## 15. Regulatory information

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**



**International inventories**

USA (TSCA)	Complies
European Union (EINECS and ELINCS)	Complies
Canada (DSL)	Complies
Philippines (PICCS)	Complies
Japan (ENCS)	Does not Comply
China (IECSC)	Complies
Australia (AICS)	Complies
Korean (KECL)	Complies
New Zealand (NZIoC)	Complies

**U.S. Federal and State Regulations****SARA 311/312 Hazard Categories**

Delayed (chronic) health hazard.

Component	SARA 302 / TPQs	SARA 313	CERCLA RQ
Carbon	N/A	N/A	N/A
Cellulose	N/A	N/A	N/A
Graphite	N/A	N/A	N/A
Silica, crystalline, quartz	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. See table under U.S. Federal and State Regulations for the specific chemicals.

This product has been classified in accordance with the hazard criteria of the CPR and the SDS contains all the information required by the CPR.

**WHMIS Hazard Class** D2A

**Brazilian Regulations****16. Other information**

<b>Supersedes date</b>	11/Oct/2014
<b>Revision date</b>	16/Mar/2016
<b>Version</b>	2
<b>The following sections have been revised</b>	All sections. Updated according to GHS/CLP.

**HMIS classification**

Health	1*
Flammability	1
Physical hazard	0
PPE	E

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

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