

Safety data sheet number PID15924
Version 2
Revision date 03/May/2016
Supercedes date 24/Aug/2011



Safety Data Sheet OPTISEAL* II

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

1.1 Product identifier

Product name OPTISEAL* II
Product code PID15924
Denmark Pr. no. 2142169

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 Drilling Fluids UK Limited
C/O Schlumberger
Enterprise Drive
Westhill Industrial Estate
Westhill, AB32 6TQ
Scotland UK
+47 51577424

MISDS@slb.com

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

Denmark	Poison Control Hotline (DK): +45 82 12 12 12
Norway	Poison information centre: +47 22 59 13 00

2. Hazards identification

2.1 Classification of the substance or mixture

Regulation (EC) No. 1272/2008

Health hazards Not classified
Environmental hazards Not classified
Physical Hazards Not classified

2.2 Label Elements

Signal word
None

Hazard statements

This product is not classified as hazardous therefore no (H) hazard statements assigned.

Precautionary Statements - EU (§28, 1272/2008)

This product is not classified as hazardous therefore has no (P) precautionary statements assigned.

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Contains

Calcium carbonate

Graphite (Natural)

Crystalline silica (impurity)

2.3 Other data

Not classified as PBT/vPvB by current EU criteria

3. Composition/information on ingredients

3.1 Substances

Not Applicable

3.2 Mixtures

Component	EC-No.	CAS-No	Weight % - range	Classification (67/548)	Classification (Reg. 1272/2008)	REACH registration number
Calcium carbonate	207-439-9	471-34-1	30-60	-	Not classified	Exempt
Graphite (Natural)	231-955-3	7782-42-5	5-10	Not classified	Not Classified	Exempt
Crystalline silica (impurity)	238-878-4	14808-60-7	<1	Xn; R48/20	STOT Rep. 2 - H373	Exempt

Comments

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

This product contains a small quantity of quartz, crystalline silica. Prolonged and repeated exposure to concentrations of crystalline silica exceeding the workplace exposure limit (WEL) may lead to chronic lung disease such as silicosis. IARC Monographs, Vol. 68, 1997, concludes that there is sufficient evidence that inhaled crystalline silica in the form of quartz or cristobalite from occupational sources causes cancer in humans. IARC Classification Group I.

4. First aid measures

4.1 First Aid

Inhalation	If inhaled, remove from area to fresh air. Get medical attention if respiratory irritation develops or if breathing becomes difficult.
Ingestion	Rinse mouth. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Get medical attention if symptoms occur.
Skin contact	Wash skin thoroughly with soap and water. Get medical attention if irritation persists.
Eye contact	Promptly wash eyes with lots of water while lifting eye lids. Remove contact lenses. 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.

Main symptoms

Inhalation	Please see Section 11. Toxicological Information for further information.
Ingestion	Please see Section 11. Toxicological Information for further information.
Skin contact	Please see Section 11. Toxicological Information for further information.
Eye contact	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

Use extinguishing media appropriate for surrounding material.

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

Dust may form explosive mixture in air.

Hazardous combustion products

Thermal decomposition can lead to release of irritating gases and vapours.

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

Use personal protective equipment. See also section 8. Extinguish all ignition sources. Avoid sparks, flames, heat and smoking.

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 materials for containment and cleaning up

Methods for Containment

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

Methods for cleaning up

Sweep up and shovel into suitable containers for disposal. After cleaning, flush away traces with water.

6.4 Reference to other sections

See section 13 for more information.

7. Handling and storage

7.1 Precautions for safe handling

Handling

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin and eyes. Avoid dust formation.

Hygiene measures

Use good work and personal hygiene practices to avoid exposure. When using do not smoke, eat or drink. Wash hands and face before breaks and immediately after handling the product. Remove contaminated clothing.

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: Strong oxidising agents
Storage class	Chemical storage.
Packaging material	Use specially constructed containers only

7.3 Specific end uses

See Section 1.2.

8. Exposure controls/personal protection

8.1 Control parameters

Component	EU OEL - Third List	Austria	Australia	Denmark
Calcium carbonate	Not determined	Not determined	10mg/m ³ TWainhalable dust	Not determined
Graphite (Natural)	Not determined	10 mg/m ³ STEL alveolar dust with <1% quartz, respirable fraction 5 mg/m ³ TWA alveolar dust with <1% Quartz, respirable fraction	3mg/m ³ TWArespirable dust	2.5 mg/m ³ TWA
Crystalline silica (impurity)	Not determined	0.15 mg/m ³ TWA alveolar dust, respirable fraction	0.1mg/m ³ TWArespirable dust	0.1mg/m ³

Component	Malaysia	France	Germany	Hungary
Calcium carbonate	Not determined	10 mg/m ³ TWA	Not determined	Not determined
Graphite (Natural)	2 mg/m ³ TWA	2 mg/m ³ TWA	1.5 mg/m ³ TWA 4 mg/m ³ TWA	Not determined
Crystalline silica (impurity)	0.1 mg/m ³ TWA	0.1 mg/m ³ TWA	Not determined	0.15mg/m ³ TWA

Component	New Zealand	Italy	Netherlands	Norway
Calcium carbonate	Not Determined	Not determined	Not determined	Not determined
Graphite (Natural)	3 mg/m ³ TWA	Not determined	Not determined	5 mg/m ³ TWA total dust 2 mg/m ³ TWA respirable dust 10 mg/m ³ TWA total dust 4 mg/m ³ TWA respirable dust 5 mg/m ³ STEL total dust 2 mg/m ³ STEL respirable dust 10 mg/m ³ STEL total dust 4 mg/m ³ STEL respirable dust
Crystalline silica (impurity)	0.2 mg/m ³ TWA Known or presumed human carcinogen	Not determined	0.075 mg/m ³	0.3 mg/m ³ TWA total dust 0.1 mg/m ³ TWA respirable dust 0.3 mg/m ³ STEL total

				dust 0.1 mg/m ³ STEL respirable dust Carcinogen
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Component	Poland	Portugal	Romania	Russia
Calcium carbonate	10 mg/m ³ TWA <2% free crystalline silica total inhalable dust	10 mg/m ³ TWA particulate matter containing no Asbestos and < 1% Crystalline silica	Not determined	Not determined
Graphite (Natural)	4.0 mg/m ³ TWA NDS natural 1.0 mg/m ³ TWA NDS natural 6.0 mg/m ³ TWA NDS synthetic	2 mg/m ³ TWA all forms except Graphite fibers respirable fraction	2mg/m ³ TWArespirable fraction, dust	Not determined
Crystalline silica (impurity)	2 mg/m ³ TWA NDS >50% free crystalline silica 0.3 mg/m ³ TWA NDS >50% free crystalline silica 4.0 mg/m ³ TWA NDS 2% to 50% free crystalline silica 1.0 mg/m ³ TWA NDS 2% to 50% free crystalline silica	0.025 mg/m ³ TWA respirable fraction	0.1 mg/m ³ TWArespirable fraction, dust	3 mg/m ³ STEL disintegration aerosol 3 mg/m ³ STEL aerosol 1 mg/m ³ TWA disintegration aerosol 1 mg/m ³ TWA aerosol Fibrogenic substance and with its content in dust 2-10% and 10-70% Amorphous and vitreous silicon dioxide; Crystalline silicon dioxide

Component	Spain	Switzerland	Turkey	UK
Calcium carbonate	10 mg/m ³ VLA-ED	Not determined	Not determined	Not determined
Graphite (Natural)	2 mg/m ³ TWA VLA-ED	2.5 mg/m ³ TWA MAK natural 5 mg/m ³ TWA MAK natural	Not determined	30 mg/m ³ STEL calculated inhalable dust 12 mg/m ³ STEL calculated respirable dust 10 mg/m ³ TWA inhalable dust 4 mg/m ³ TWA respirable dust
Crystalline silica (impurity)	0.05 mg/m ³ TWA VLA-ED	0.15 mg/m ³ TWA MAK	Not determined	0.3 mg/m ³ STEL calculated respirable 0.1 mg/m ³ TWA respirable

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. Mechanical ventilation or local exhaust ventilation is required.

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** No personal respiratory protective equipment normally required, In case of insufficient ventilation wear suitable respiratory equipment, Suitable mask with particle filter P3 (European Norm 143), At work in confined or poorly ventilated spaces, respiratory protection with air supply must be used.
- 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
Odour	Odourless
Colour	Grey
Odor threshold	Not applicable

<u>Property</u>	<u>Values</u>	<u>Remarks</u>
pH	No information available	
pH @ dilution	No information available	
Melting/freezing point	No information available	
Boiling point/range	No information available	
Flash Point	No information available	
Evaporation rate	No information available	
Flammability (solid, gas)	Not Applicable	
Flammability Limits in Air		
Upper flammability Limit	Not applicable	
Lower flammability limit	Not applicable	
Vapor pressure	No information available	
Vapor density	No information available	
Specific gravity	No information available	
Bulk density	No information available	

Relative density	2.2 - 2.4 sg	@ 20 °C.
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	
Viscosity, dynamic	No information available	
Log Pow	Not determined	

Explosive properties	Not Applicable
Oxidizing properties	None known.

9.2 Other information

Pour point	No information available
Molecular weight	No information available
VOC content(%)	None
Density VALUE	No information available
Particle Size (Micron)	500-600µm

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 polymerisation does not occur.

10.4 Conditions to avoid

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

10.5 Incompatible materials

Strong oxidising agents.

10.6 Hazardous decomposition products

See Section 5.2.

11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product information

This product contains a small quantity of quartz, crystalline silica. Prolonged and repeated exposure to concentrations of crystalline silica exceeding the workplace exposure limit

(WEL) may lead to chronic lung disease such as silicosis.

Inhalation Inhalation of dust in high concentration may cause irritation of respiratory system.
Eye contact Dust may cause mechanical irritation.
Skin contact Prolonged contact may cause redness and irritation.
Ingestion Ingestion may cause stomach discomfort.
Unknown acute toxicity Not Applicable.

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Calcium carbonate	= 6450 mg/kg (Rat)	No data available	No data available
Graphite (Natural)	No data available	No data available	No data available
Crystalline silica (impurity)	= 500 mg/kg (Rat)	No data available	No data available

Sensitisation This product does not contain any components suspected to be sensitizing.
Mutagenic effects This product does not contain any known or suspected mutagens.
Carcinogenicity Crystalline silica dust is listed by IARC in Group 1 as known to cause lung cancer in humans, if inhaled.

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

Routes of exposure Inhalation.

Routes of entry Inhalation.

Specific target organ toxicity (single exposure) Not classified

Specific target organ toxicity (repeated exposure) Not classified.

Aspiration hazard Not Applicable.

12. Ecological information

12.1 Toxicity

The product component(s) are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

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.

Component	Toxicity to fish	Toxicity to algae	Toxicity to daphnia and other aquatic invertebrates
Calcium carbonate	No information available	No information available	No information available
Graphite (Natural)	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

No product level data available.

12.3 Bioaccumulative potential

No data available.

12.4 Mobility in soil

Mobility

Insoluble in water.

12.5 Results of PBT and vPvB assessment

Not classified as PBT/vPvB by current EU criteria.

12.6 Other adverse effects.

None known.

13. Disposal considerations

13.1 Waste treatment methods

Waste from residues / unused Dispose of in accordance with local regulations.

products

- Contaminated packaging** Empty containers should be transported/delivered using a registered waste carrier for local recycling or waste disposal.
- EWC waste disposal No.** According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user based on the application for which the product was used. The following Waste Codes are only suggestions: EWC waste disposal No: 07 01 99.

14. Transport information

14.1 UN number

Not regulated

14.2 Proper shipping name

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

14.3. Hazard class(es)

ADR/RID/ADN/ADG Hazard class	Not regulated
IMDG Hazard class	Not regulated
ICAO Hazard class/division	Not regulated

14.4 Packing group

ADR/RID/ADN/ADG Packing Group	Not regulated
IMDG Packing group	Not regulated
ICAO Packing group	Not regulated

14.5 Environmental hazard

No

14.6 Special precautions

Not Applicable

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

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

15. Regulatory information

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

Commission Regulation (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH). Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and

2000/21/EC, including amendments.

This safety data sheet complies with the requirements of Regulation (EC) No. 1272/2008.

International inventories

USA, Toxic Substances Control Act inventory (TSCA)	Complies
European Union - EINECS and ELINCS	Complies
Canada, Domestic Substance List (DSL)	Complies
Philippines (PICCS)	Does not Comply
Inventory - Japan - Existing and New Chemicals list	Does not Comply
China (IECSC)	Complies
Australia (AICS)	Complies
Korea (KECL)	Complies
Inventory - New Zealand - Inventory of Chemicals (NZIoC)	Complies

Contact REACH@miswaco.slb.com for REACH information.

15.2 Chemical Safety Report

No information available

16. Other information

Prepared by	Global Regulatory Compliance - Chemicals (GRC - Chemicals) , Anne Karin (Anka) Fosse
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Version	2
The following sections have been revised:	This SDS have been made in a new database and therefore a new layout. No changes with regard to classification have been made, Updated according to GHS/CLP.

Text of R phrases mentioned in Section 3

R48/20 - Harmful: danger of serious damage to health by prolonged exposure through inhalation

Full text of H-Statements referred to under sections 2 and 3

This product is not classified as hazardous therefore no (H) hazard statements assigned.

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

*A mark of M-I L.L.C., a Schlumberger Company

Disclaimer

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