

Safety data sheet number PID1644  
Version 10  
Revision date 11/Jul/2017  
Supercedes date 12/Feb/2015



## Safety Data Sheet VERSACLEAN\*

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

#### 1.1 Product identifier

Product name VERSACLEAN\*  
Product code PID1644

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

Recommended Use Drilling fluid system.

Uses advised against Consumer use

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

##### Supplier

M-I Drilling Fluids UK Limited  
Westhill Business Park  
Westhill AB32 6JL Aberdeenshire  
Scotland United Kingdom

+47 51577424

SDS@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

Netherlands	National Poisons Information Centre (NL): +31 30 274 88 88 (NB: this service is only available to health professionals)
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### 2. Hazards Identification

#### 2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

##### Health hazards

Serious eye damage/eye irritation	Category 2
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Environmental hazards Not classified

Physical Hazards Not classified

#### 2.2 Label elements



**Signal word**  
WARNING

**Hazard statements**

H319 - Causes serious eye irritation

**EU Specific Hazard Statements**

EUH066 - Repeated exposure may cause skin dryness or cracking

EUH208 - Contains ( Fatty acids, tall-oil, rxn pdcts with diethylenetriamine, maleic anhydride, tetraethylenepentamine and triethylenetetramine ). May produce an allergic reaction

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

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

P280 - Wear protective gloves/protective clothing/eye protection/face protection

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P337 + P313 - If eye irritation persists: Get medical advice/attention

P391 - Collect spillage

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

**Supplementary precautionary statements**

P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention

**Contains**

Barite (Ba(SO<sub>4</sub>))

Hydrocarbons, C14-C18, n-alkanes, isoalkanes, cyclics, < 2% aromatics

Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics

Calcium chloride

Crystalline silica (impurity)

Calcium carbonate

Calcium hydroxide

Fatty acids, tall-oil, reaction products with diethylenetriamine, maleic anhydride, tetraethylenepentamine and triethylenetetramine

**2.3 Other hazards**

Not classified as PBT/vPvB by current EU criteria

**3. Composition/information on ingredients**

### 3.1 Substances

Not applicable

### 3.2 Mixtures

Chemical Name	EC No	CAS No	Weight-%	Regulation (EC) No 1272/2008	REACH registration number
Barite (Ba(SO <sub>4</sub> ))	236-664-5	13462-86-7	30-60	Not classified	No data available
Hydrocarbons, C14-C18, n-alkanes, isoalkanes, cyclics, < 2% aromatics	927-632-8	*	0-60	Asp. Tox. 1 (H304) EUH066	01-2119457736-2 7-0001
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics	926-141-6	*	0-60	Asp. Tox. 1 (H304) EUH066	01-2119456620-4 3-xxxx
Calcium chloride	233-140-8	10043-52-4	5-10	Eye Irrit. 2 (H319)	01-2119494219-2 8-xxxx
Crystalline silica (impurity)	238-878-4	14808-60-7	1-5	STOT Rep. 2 - H373	Exempt
Calcium carbonate	207-439-9	471-34-1	1-5	Not classified	Exempt
Calcium hydroxide	215-137-3	1305-62-0	1-<3	Eye Dam. 1 (H318) Skin Irrit. 2 (H315) STOT SE 3 (H335)	01-2119475151-4 5-xxxx
Fatty acids, tall-oil, reaction products with diethylenetriamine, maleic anhydride, tetraethylenepentamine and triethylenetetramine	273-601-0	68990-47-6	<1	Skin Sens. 1 (H317)	01-2119496070-4 2-xxxx

### Comments

Drilling fluid is a highly complex and variable blend of several proprietary products. Each drilling fluid is designed to meet the drilling requirements of a specific well. During the drilling process the composition and physical properties of the drilling fluid are constantly changing; therefore, a complete disclosure of a particular fluid's composition is impractical.

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

The viscosity of this product is high enough that it is not an aspiration risk and the R65/H304 phrase does not apply.

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.

\*Substances which have an EC Number that begins with the number "9" is a Provisional List Number. The list numbers published by ECHA do not have any legal significance. The EC substance definition and related classification & labelling has been developed in the framework of the Regulation (EC) No 1907/2006 (REACH). For information about the related CAS number see section 15 of this SDS.

## 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. If vomiting occurs spontaneously, minimize the risk of aspiration by properly positioning the affected person. Get medical attention if symptoms occur.
<b>Skin contact</b>	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get medical attention if irritation persists.
<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**

**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 must not be used for safety reasons**

None known.

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

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

None known.

##### **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.

### **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. Dyke far ahead of liquid spill for later disposal.

#### **Methods for cleaning up**

Absorb with earth, sand or other non-combustible material and transfer to containers for later 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. Do not breathe vapors or spray mist. Avoid spills and splashing during use. Persons susceptible to allergic reactions should not handle this product.

#### **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

**Storage class** Chemical storage.  
**Packaging materials** Use specially constructed containers only

**7.3 Specific end uses**

See Section 1.2.

**8. Exposure controls/personal protection**

**8.1 Control parameters**

**Component Information**

**Exposure Limits**

Because this product is a liquid, the dust-related Workplace Exposure Limits for the components do not apply.  
 Oil mist (mineral) workplace exposure limits are currently under review by legislative authorities. This workplace exposure limit (WEL) standard is applicable to highly refined mineral oils and is provided as a guidance limit only LT. EXP = 5mg/m<sup>3</sup> and ST. EXP = 10mg/m<sup>3</sup>.

Chemical Name	EU OEL - Third List	Austria	Australia	Denmark
Barite (Ba(SO <sub>4</sub> ))	Not determined	Not determined	Not determined	Not determined
Hydrocarbons, C14-C18, n-alkanes, isoalkanes, cyclics, < 2% aromatics	Not determined	Not determined	Not determined	Not determined
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics	Not determined	Not determined	Not determined	Not determined
Calcium chloride	Not determined	Not determined	Not determined	Not determined
Crystalline silica (impurity)	Not determined	0.15 mg/m <sup>3</sup> TWA alveolar dust, respirable fraction	0.1mg/m <sup>3</sup> TWArespirable dust	0.1mg/m <sup>3</sup>
Calcium carbonate	Not determined	Not determined	10mg/m <sup>3</sup> TWAinhalable dust	Not determined
Calcium hydroxide	Not determined	4 mg/m <sup>3</sup> STEL inhalable fraction 2 mg/m <sup>3</sup> TWA inhalable fraction	5mg/m <sup>3</sup> TWA	5 mg/m <sup>3</sup> TWA
Fatty acids, tall-oil, reaction products with diethylenetriamine, maleic anhydride, tetraethylenepentamine and triethylenetetramine	Not determined	Not determined	Not determined	Not determined
Chemical Name	Malaysia	France	Germany	Hungary
Barite (Ba(SO <sub>4</sub> ))	Not determined	Not determined	Not determined	Not determined
Hydrocarbons, C14-C18, n-alkanes, isoalkanes, cyclics, < 2% aromatics	Not determined	Not determined	Not determined	Not determined
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics	Not determined	Not determined	Not determined	Not determined
Calcium chloride	Not determined	Not determined	Not determined	Not determined
Crystalline silica (impurity)	0.1 mg/m <sup>3</sup> TWA	0.1 mg/m <sup>3</sup> TWA	Not determined	0.15mg/m <sup>3</sup> TWA
Calcium carbonate	Not determined	10 mg/m <sup>3</sup> TWA	Not determined	Not determined
Calcium hydroxide	5 mg/m <sup>3</sup> TWA	5 mg/m <sup>3</sup> TWA	1 mg/m <sup>3</sup> TWA	5mg/m <sup>3</sup> TWA
Fatty acids, tall-oil, reaction products with diethylenetriamine, maleic anhydride, tetraethylenepentamine and triethylenetetramine	Not determined	Not determined	Not determined	Not determined
Chemical Name	New Zealand	Italy	Netherlands	Norway
Barite (Ba(SO <sub>4</sub> ))	Not determined	Not determined	Not determined	Not determined

Hydrocarbons, C14-C18, n-alkanes, isoalkanes, cyclics, < 2% aromatics	Not determined	Not determined	Not determined	Not determined
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics	Not determined	Not determined	Not determined	Not determined
Calcium chloride	Not determined	Not determined	Not determined	Not determined
Crystalline silica (impurity)	0.1 mg/m <sup>3</sup> TWA Confirmed carcinogen	Not determined	0.075 mg/m <sup>3</sup>	0.3 mg/m <sup>3</sup> TWA total dust 0.1 mg/m <sup>3</sup> TWA respirable dust 0.9 mg/m <sup>3</sup> STEL total dust 0.3 mg/m <sup>3</sup> STEL respirable dust Carcinogen
Calcium carbonate	10 mg/m <sup>3</sup> TWA	Not determined	Not determined	Not determined
Calcium hydroxide	5 mg/m <sup>3</sup> TWA	Not determined	5 mg/m <sup>3</sup>	5 mg/m <sup>3</sup> TWA 10 mg/m <sup>3</sup> STEL
Fatty acids, tall-oil, reaction products with diethylenetriamine, maleic anhydride, tetraethylenepentamine and triethylenetetramine	Not determined	Not determined	Not determined	Not determined
<b>Chemical Name</b>	<b>Poland</b>	<b>Portugal</b>	<b>Romania</b>	<b>Russia</b>
Barite (Ba(SO <sub>4</sub> ))	Not determined	Not determined	Not determined	6 mg/m <sup>3</sup> TWA 0233 Fibrogenic substance 0233
Hydrocarbons, C14-C18, n-alkanes, isoalkanes, cyclics, < 2% aromatics	Not determined	Not determined	Not determined	Not determined
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics	Not determined	Not determined	Not determined	Not determined
Calcium chloride	Not determined	Not determined	Not determined	2 mg/m <sup>3</sup> MAC (aerosol)
Crystalline silica (impurity)	2 mg/m <sup>3</sup> TWA NDS >50% free crystalline silica 0.3 mg/m <sup>3</sup> TWA NDS >50% free crystalline silica 4.0 mg/m <sup>3</sup> TWA NDS 2% to 50% free crystalline silica 1.0 mg/m <sup>3</sup> TWA NDS 2% to 50% free crystalline silica	0.025 mg/m <sup>3</sup> TWA respirable fraction	0.1mg/m <sup>3</sup> TWAdust, respirable fraction	3 mg/m <sup>3</sup> STEL 1123 disintegration aerosol, total mass of aerosols 3 mg/m <sup>3</sup> STEL 1124 total mass of aerosols 1 mg/m <sup>3</sup> TWA 1123 1 mg/m <sup>3</sup> TWA 1124 Fibrogenic substance glass;regulated under Quartz 1123, 1124
Calcium carbonate	10 mg/m <sup>3</sup> TWA NDS <2% free crystalline silica	10 mg/m <sup>3</sup> TWA particulate matter containing no Asbestos and <1% Crystalline silica	Not determined	Not determined
Calcium hydroxide	4 mg/m <sup>3</sup> STEL NDsch 6 mg/m <sup>3</sup> STEL NDsch 2 mg/m <sup>3</sup> TWA NDS 1 mg/m <sup>3</sup> TWA NDS	5 mg/m <sup>3</sup> TWA indicative limit value	5mg/m <sup>3</sup> TWA	2 mg/m <sup>3</sup> MAC Skin
Fatty acids, tall-oil, reaction products with diethylenetriamine, maleic anhydride, tetraethylenepentamine and triethylenetetramine	Not determined	Not determined	Not determined	Not determined
<b>Chemical Name</b>	<b>Spain</b>	<b>Switzerland</b>	<b>Turkey</b>	<b>UK</b>
Barite (Ba(SO <sub>4</sub> ))	Not determined	Not determined	Not determined	Not determined
Hydrocarbons, C14-C18, n-alkanes, isoalkanes, cyclics, < 2% aromatics	Not determined	Not determined	Not determined	Not determined
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics	Not determined	Not determined	Not determined	Not determined

Calcium chloride	Not determined	Not determined	Not determined	Not determined
Crystalline silica (impurity)	0.05 mg/m <sup>3</sup> TWA VLA-ED	0.15 mg/m <sup>3</sup> TWA MAK	Not determined	Not determined
Calcium carbonate	Not determined	3 mg/m <sup>3</sup> TWA MAK	Not determined	Not determined
Calcium hydroxide	5 mg/m <sup>3</sup> TWA VLA-ED	5 mg/m <sup>3</sup> TWA MAK	5 mg/m <sup>3</sup> TWA	15 mg/m <sup>3</sup> STEL calculated 5 mg/m <sup>3</sup> TWA
Fatty acids, tall-oil, reaction products with diethylenetriamine, maleic anhydride, tetraethylenepentamine and triethylenetetramine	Not determined	Not determined	Not determined	Not determined

### Derived No Effect Level (DNEL)

#### Short term exposure local effects

##### Calcium chloride

Inhalation 10 mg/m<sup>3</sup>

##### Calcium hydroxide

Inhalation 4 mg/m<sup>3</sup>

##### Fatty acids, tall-oil, reaction products with diethylenetriamine, maleic anhydride, tetraethylenepentamine and triethylenetetramine

Dermal 1388 µg/cm<sup>2</sup>

Inhalation 14693 µg/m<sup>3</sup>

#### Long term exposure local effects

##### Calcium chloride

Inhalation 5 mg/m<sup>3</sup>

##### Calcium hydroxide

Inhalation 1 mg/m<sup>3</sup>

##### Fatty acids, tall-oil, reaction products with diethylenetriamine, maleic anhydride, tetraethylenepentamine and triethylenetetramine

Dermal 1388 µg/cm<sup>2</sup>

Inhalation 14693 µg/m<sup>3</sup>

#### Short term exposure systemic effects

##### Fatty acids, tall-oil, reaction products with diethylenetriamine, maleic anhydride, tetraethylenepentamine and triethylenetetramine

Dermal 33332 µg/kg

Inhalation 29386 µg/m<sup>3</sup>

#### Long term exposure systemic effects

##### Fatty acids, tall-oil, reaction products with diethylenetriamine, maleic anhydride, tetraethylenepentamine and triethylenetetramine

Dermal 16666 µg/kg

Inhalation 14693 µg/m<sup>3</sup>

#### Predicted No Effect Concentration (PNEC)

##### Calcium hydroxide

Fresh Water 0.49 mg/L

Sea Water 0.32 mg/L

Soil 1080 mg/kg

Impact on sewage treatment 3 mg/L

Intermittent release 0.49 mg/L

##### Fatty acids, tall-oil, reaction products with diethylenetriamine, maleic anhydride, tetraethylenepentamine and triethylenetetramine

Fresh Water 0.00217 mg/L

Sea Water 0.000217 mg/L

Freshwater sediment 180 mg/kg

Sea sediment 18 mg/kg

Soil 146 mg/kg

Impact on sewage treatment 1 mg/l

Intermittent release 0.0217 mg/l

### 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 Controls

Ensure adequate ventilation. Provide mechanical general and/or local exhaust ventilation to prevent release of vapor or mist into work environment.

### Personal protective equipment

<b>Eye protection</b>	Eye protection must conform to standard EN 166. Tightly fitting safety goggles. Safety glasses with side-shields.
<b>Hand protection</b>	Wear chemically resistant gloves (tested to EN 374) in combination with 'basic' employee training Use protective gloves made of: Nitrile PVA Neoprene PVC Break through time >480 minutes Glove thickness 0.3 mm Be aware that liquid may penetrate the gloves. Frequent change is advisable.
<b>Respiratory protection</b>	No personal respiratory protective equipment normally required, In case of insufficient ventilation wear suitable respiratory equipment, Respirator with a vapor filter (EN 141), Use respirator with organic vapor protection (A, brown), At work in confined or poorly ventilated spaces, respiratory protection with air supply must be used.
<b>Skin and body protection</b>	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

<b>Physical state</b>	Liquid
<b>Appearance</b>	Viscous
<b>Odour</b>	Hydrocarbon like
<b>Colour</b>	Dark brown
<b>Odour threshold</b>	Not applicable

Property	Values	Remarks
pH	No information available	
pH @ dilution	No information available	
Melting / freezing point	No information available	
Boiling point/range	> 180 °C / 356 °F	
Flash point	> 75 °C / > 167 °F	PMCC
Evaporation rate	No information available	
Flammability (solid, gas)	Not applicable	

<b>Flammability Limit in Air</b>		
Upper flammability limit	Not applicable	
Lower flammability limit	Not applicable	
<b>Vapour pressure</b>	No information available	
<b>Vapour density</b>	No information available	
<b>Specific gravity</b>	1.5 - 2.3 sg	
<b>Bulk density</b>	No information available	
<b>Relative density</b>	No information available	
<b>Water solubility</b>	Insoluble in water	
<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>	>20.5 mm <sup>2</sup> /s	@ 40 °C
<b>Dynamic viscosity</b>	No information available	
<b>log Pow</b>	Not determined	

**Explosive properties**                      Not applicable  
**Oxidising properties**                    None known

**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**

No specific reactivity hazards associated with this product.

**10.2 Chemical stability**

Stable under normal temperature conditions and recommended use.

**10.3 Possibility of Hazardous Reactions**

**Hazardous polymerisation**

Hazardous polymerisation does not occur.

**10.4 Conditions to avoid**

None known.

**10.5 Incompatible materials**

No materials to be especially mentioned.

**10.6 Hazardous decomposition products**

See Section 5.2.

## 11. Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

<b>Product information</b>	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. Because this product is a liquid, under normal and recommended use, exposure to Respirable Crystalline Silica will not apply.
<b>Inhalation</b>	Vapors may irritate throat and respiratory system.
<b>Eye contact</b>	Causes serious eye irritation.
<b>Skin contact</b>	Prolonged contact may cause redness and irritation. Repeated exposure may cause skin dryness or cracking. Components of the product may be absorbed into the body through the skin.
<b>Ingestion</b>	Ingestion may cause stomach discomfort.
<b>Unknown acute toxicity</b>	Not applicable.

#### Toxicology data for the components

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Barite (Ba(SO <sub>4</sub> ))	> 15000 mg/kg ( Rat )	No data available	No data available
Hydrocarbons, C14-C18, n-alkanes, isoalkanes, cyclics, < 2% aromatics	No data available	No data available	No data available
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics	> 5000 mg/kg (Rat)	> 2000 mg/kg ( Rabbit )	> 5.2 mg/L ( Rat ) 4 h
Calcium chloride	= 1000 mg/kg ( Rat )	> 5000 mg/kg ( Rabbit )	No data available
Crystalline silica (impurity)	= 500 mg/kg ( Rat )	No data available	No data available
Calcium carbonate	= 6450 mg/kg ( Rat )	No data available	No data available
Calcium hydroxide	= 7340 mg/kg ( Rat )	No data available	No data available
Fatty acids, tall-oil, reaction products with diethylenetriamine, maleic anhydride, tetraethylenepentamine and triethylenetetramine	> 2020 mg/kg (Rat)	> 2000 mg/kg (Rat) OECD 402 - Duration: 24h - Literature data	No data available

<b>Sensitisation</b>	EUH208 - Contains ( Fatty acids, tall-oil, rxn pdcts with diethylenetriamine, maleic anhydride, tetraethylenepentamine and triethylenetetramine ). May produce an allergic reaction.
<b>Mutagenic effects</b>	This product does not contain any known or suspected mutagens.
<b>Carcinogenicity</b>	Crystalline silica dust is listed by IARC in Group 1 as known to cause lung cancer in humans, if inhaled.

<b>Reproductive toxicity</b>	This product does not contain any known or suspected reproductive hazards.
<b>Routes of exposure</b>	Eye contact. Skin contact.
<b>Routes of entry</b>	Eye contact. Skin contact.
<b>Specific target organ toxicity - Single exposure</b>	Not classified
<b>Specific target organ toxicity - Repeated exposure</b>	Not classified.
<b>Aspiration hazard</b>	The viscosity of this product is high enough that it is not an aspiration risk and the R65/H304 phrase does not apply.

## 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.

Chemical Name	Toxicity to fish	Toxicity to algae	Toxicity to daphnia and other aquatic invertebrates
Barite (Ba(SO <sub>4</sub> ))	No information available	No information available	No information available
Hydrocarbons, C14-C18, n-alkanes, isoalkanes, cyclics, < 2% aromatics	No information available	No information available	No information available
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics	No information available	No information available	No information available
Calcium chloride	= 10650 mg/L LC50 Lepomis macrochirus 96 h	No information available	2,400 mg/L EC50 (Daphnia magna) = 48 h
Crystalline silica (impurity)	No information available	No information available	No information available
Calcium carbonate	No information available	No information available	No information available
Calcium hydroxide	= 160 mg/L LC50 Gambusia affinis 96 h	No information available	No information available
Fatty acids, tall-oil, reaction products with diethylenetriamine, maleic anhydride, tetraethylenepentamine and	OECD 203 Fish LC50 > 100 mg/l - Duration h: 96 Literature data	OECD 201 Algae EC50 > 100 mg/l - Duration h: 72 Literature data	OECD 202 Daphnia magna NOEC = 100 mg/l - Duration h: 48 Literature data

triethylenetetramine			
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**12.2 Persistence and degradability**

No product level data available.

**12.3 Bioaccumulative potential**

No product level 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 products**

Dispose of in accordance with local regulations.

**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: 01 05 05

## 14. Transport information

### 14.1. UN number

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)

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

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

Oil-based muds containing mixtures of products listed in Chapters 17 and 18 of the IBC Code and the latest MEPC.2/Circular are permitted to be carried under Annex II of MARPOL and resolution A.673, (16) Offshore Supply Vessel Code. Please contact SDS@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

Germany, Water Endangering Classes (VwVwS) Water endangering class = 1

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.

**Dutch Mining Regulations:** In accordance with Mining Regulations 9.2 and Chapter 4 of the Working Conditions Decree.

**International inventories**

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

CAS Number 64742-47-8 can be used to identify the substance given a list number in section 3 in areas not subject to the REACH regulation.

**15.2 Chemical Safety Report**

No information available

**16. Other information**

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<b>Version</b>	10
<b>This SDS has been revised in the following section(s)</b>	The following sections have been revised: 14. Transport information

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

- H319 - Causes serious eye irritation
- H304 - May be fatal if swallowed and enters airways
- H315 - Causes skin irritation
- H317 - May cause an allergic skin reaction
- H318 - Causes serious eye damage
- H335 - May cause respiratory irritation
- H373 - May cause damage to organs through prolonged or repeated exposure if inhaled
- EUH066 - Repeated exposure may cause skin dryness or cracking

EUH208 - Contains ( Fatty acids, tall-oil, rxn pdcts with diethylenetriamine, maleic anhydride, tetraethylenepentamine and triethylenetetramine ). May produce an allergic reaction

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