

Safety data sheet number MI10456
Version 5
Revision date 12/Jun/2015
Supercedes date 25/Aug/2009



Safety Data Sheet VERSACLEAN⁺ VB

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

1.1 Product identifier

Product name VERSACLEAN⁺ VB
Product code MI10456

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

Recommended use Emulsifier
Uses advised against Consumer use

1.3 Details of the supplier of the safety data sheet

Supplier identification
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

2. Hazards identification

2.1 Classification of the substance or mixture

Regulation (EC) No. 1272/2008

Health hazards

Skin sensitisation	Category 1
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Environmental hazards Not classified

Physical Hazards Not classified

2.2 Label Elements



Signal word

WARNING

Hazard statements

H317 - May cause an allergic skin reaction

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

P261 - Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray

P272 - Contaminated work clothing should not be allowed out of the workplace

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

P302 + P352 - IF ON SKIN: Wash with plenty of soap and water

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

P501 - Dispose of contents/container in accordance with local regulations.

Supplementary precautionary statements

P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell

P363 - Wash contaminated clothing before re-use

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Contains

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

(2-methoxymethylethoxy)propanol

Distillates (petroleum), hydrotreated light

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
Fatty acids, tall-oil, reaction products with diethylenetriamine, maleic anhydride, tetraethylenepentamine and triethylenetetramine	273-601-0	68990-47-6	60-100	Xi; R43	Skin Sens. 1 (H317)	01-2119496070-42-xxx
(2-methoxymethylethoxy)propanol	252-104-2	34590-94-8	10-30	-	Not classified	01-2119450011-60-xxx
Distillates (petroleum), hydrotreated light	265-149-8	64742-47-8	5-10	Xn; R65	Asp. Tox. 1 (H304)	01-2119484819-18-xxx

Comments

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

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. Seek medical attention if irritation occurs.
Skin contact	Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. Seek immediate medical attention/advice.
Eye contact	Remove contact lenses. Promptly wash eyes with lots of water while lifting eye lids. 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

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.
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5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water Fog, Alcohol Foam, CO₂, Dry Chemical.

Extinguishing media which shall not be used for safety reasons

Do not use halon type extinguisher.

5.2 Special hazards arising from the substance or mixture

Unusual fire and explosion hazards

Vapors are heavier than air and may spread along floors.

Hazardous combustion products

Fire or high temperatures create: Amines, Carbon oxides (COx), Hydrocarbon, Nitrogen oxides (NOx), Aldehydes, Ketones.

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 materials for containment and cleaning up

Methods for Containment

Prevent further leakage or spillage if safe to do so. Dike 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 before eating, drinking or smoking. 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. Keep away from open flames, hot surfaces and sources of ignition. Avoid contact with: Aluminum Acids, Strong bases, Strong oxidising agents, Strong reducing agents. Avoid: Exposure to air.

Storage class Chemical storage.

Packaging material Use specially constructed containers only.

7.3 Specific end uses

See also Section 1.2.

8. Exposure controls/personal protection

8.1 Control parameters

Exposure limits 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/m³ and ST. EXP = 10mg/m³.

Component	EU OEL - Third List	Austria	Australia	Denmark
Fatty acids, tall-oil, reaction products with diethylenetriamine, maleic anhydride, tetraethylenepentamine and triethylenetetramine	Not determined	Not determined	Not determined	Not determined
(2-methoxymethylethoxy)propanol	50 ppm TWA 308 mg/m ³ TWA Possibility of significant uptake through the skin	Not determined	skin notation 50 ppm TWA; 308 mg/m ³ TWA	50 ppm TWA 300 mg/m ³ TWA Potential for cutaneous absorption

Distillates (petroleum), hydrotreated light	Not determined	Not determined	Not determined	Not determined
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Component	Malaysia	France	Germany	Hungary
Fatty acids, tall-oil, reaction products with diethylenetriamine, maleic anhydride, tetraethylenepentamine and triethylenetetramine	Not determined	Not determined	Not determined	Not determined
(2-methoxymethylethoxy)propanol	100 ppm TWA 606 mg/m ³ TWA Skin notation	50 ppm 308 mg/m ³	50 ppm MAK 310 mg/m ³ MAK	Not determined
Distillates (petroleum), hydrotreated light	Not determined	Not determined	Not determined	Not determined

Component	New Zealand	Italy	Netherlands	Norway
Fatty acids, tall-oil, reaction products with diethylenetriamine, maleic anhydride, tetraethylenepentamine and triethylenetetramine	Not Determined	Not determined	Not determined	Not determined
(2-methoxymethylethoxy)propanol	150 ppm STEL 909 mg/m ³ STEL 100 ppm TWA 606 mg/m ³ TWA Possibility of significant uptake through the skin	Not determined	300 mg/m ³	50 ppm TWA 300 mg/m ³ TWA 75 ppm STEL 375 mg/m ³ STEL Skin
Distillates (petroleum), hydrotreated light	Not Determined	Not determined	Not determined	Not determined

Component	Poland	Portugal	Romania	Russia
Fatty acids, tall-oil, reaction products with diethylenetriamine, maleic anhydride, tetraethylenepentamine and triethylenetetramine	Not determined	Not determined	Not determined	Not determined
(2-methoxymethylethoxy)propanol	480 mg/m ³ STEL 240 mg/m ³ TWA	Skin 150 ppm STEL 100 ppm TWA	50 ppm TWA; 308 mg/m ³ TWA	Not determined
Distillates (petroleum), hydrotreated light	Not determined	Not determined	Not determined	Not determined

Component	Spain	Switzerland	Turkey	UK
Fatty acids, tall-oil, reaction products with diethylenetriamine, maleic anhydride, tetraethylenepentamine and triethylenetetramine	Not determined	Not determined	Not determined	Not determined
(2-methoxymethylethoxy)propanol	Skin 50 ppm VLA-ED indicative limit value 308 mg/m ³ VLA-ED indicative limit value	50 ppm STEL 15 min 300 mg/m ³ STEL 15 min 50 ppm MAK 300 mg/m ³ MAK	Skin 50 ppm TWA 308 mg/m ³ TWA	150 ppm STEL calculated 924 mg/m ³ STEL calculated Skin 50 ppm TWA 308 mg/m ³ TWA
Distillates (petroleum), hydrotreated light	Not determined	Not determined	Not determined	Not determined

Derived No Effect Level (DNEL)

Short term exposure local effects

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

Dermal	1388 µg/cm ²
Inhalation	14693 µg/m ³

Long term exposure local effects

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

Dermal	1388 µg/cm ²
Inhalation	14693 µg/m ³

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 ³

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 ³

(2-methoxymethylethoxy)propanol

Dermal	283 mg/kg
Inhalation	308 mg/m ³

Predicted No Effect Concentration (PNEC)

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
Fresh water 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

(2-methoxymethylethoxy)propanol

Fresh Water	19 mg/l
Sea Water	1.9 mg/l
Fresh water sediment	70.2 mg/kg
Soil	2.74 mg/kg
Impact on Sewage Treatment	4168 mg/l
Intermittent release	190 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 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.
Hand protection	Use protective gloves made of: Neoprene, Butyl, Be aware that liquid may penetrate the gloves. Frequent change is advisable.
Respiratory protection	In case of insufficient ventilation wear suitable respiratory equipment, Use respirator with organic vapor protection (A, brown), 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	Liquid
Appearance	Viscous
Odour	Characteristic
Colour	Dark Amber
Odor threshold	Not applicable

<u>Property</u>	<u>Values</u>	<u>Remarks</u>
pH	No information available	
pH @ dilution		
Melting/freezing point	No information available	
Boiling point/range	> 150 °C / 302 °F	
Flash Point	65 °C / 149 °F	
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	0.96 g/cm ³	@ 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	1500 cSt	@ 40 °C
Viscosity, dynamic	No information available	
Log Pow	No information available	

Explosive properties	No information available
Oxidizing properties	No information available

9.2 Other information

Pour point	-27°C / -16.6 °F
Molecular weight	No information available
VOC content(%)	No information available
Density VALUE	No information available

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 polymerization

Hazardous polymerisation does not occur.

10.4 Conditions to avoid

Do not allow evaporation to dryness. Avoid heat, flames and other sources of ignition. Exposure to air.

10.5 Incompatible materials

Acids. Aluminum. Strong bases. Strong oxidising agents. Strong reducing agents.

10.6 Hazardous decomposition products

See also section 5.2.

11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Inhalation	May cause irritation of respiratory tract.
Eye contact	Contact with eyes may cause irritation.
Skin contact	May cause an allergic skin reaction. May be absorbed through the skin in harmful amounts.
Ingestion	Ingestion may cause stomach discomfort.
Unknown acute toxicity	Not Applicable.

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Fatty acids, tall-oil, reaction products with diethylenetriamine, maleic anhydride, tetraethylenepentamine and triethylenetetramine	No data available	No data available	No data available
(2-methoxymethylethoxy)propanol	= 5230 mg/kg (Rat)	= 9500 mg/kg (Rabbit)	No data available
Distillates (petroleum), hydrotreated light	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 5.2 mg/L (Rat) 4 h

Sensitisation	May cause allergic skin reaction.
Mutagenic effects	This product does not contain any known or suspected mutagens.
Carcinogenicity	This product does not contain any known or suspected carcinogens.
Reproductive toxicity	This product does not contain any known or suspected reproductive hazards.
Routes of exposure	Skin contact.
Routes of entry	Skin contact.
Specific target organ toxicity (single exposure)	Not classified
Specific target organ toxicity (repeated exposure)	Not classified.
Aspiration hazard	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.

Component	Toxicity to fish	Toxicity to algae	Toxicity to daphnia and other aquatic invertebrates
Fatty acids, tall-oil, reaction products with diethylenetriamine, maleic anhydride, tetraethylenepentamine and triethylenetetramine	No information available	No information available	No information available
(2-methoxymethylethoxy)propanol	10000 mg/L LC50 (Pimephales promelas) = 96 h	No information available	1919 mg/L LC50 (Daphnia magna) = 48 h

Distillates (petroleum), hydrotreated light	2.2 mg/L LC50 (Lepomis macrochirus) = 96 h 45 mg/L LC50 (Pimephales promelas) = 96 h 2.4 mg/L LC50 (Oncorhynchus mykiss) = 96 h	No information available	4720 mg/L LC50 (Den-dronereides heteropoda) = 96 h
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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: 07 01 04

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

14.7 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)	Complies
Inventory - Japan - Existing and New Chemicals list	Does not Comply
China (IECSC)	Complies
Australia (AICS)	Does not Comply
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
Supersedes date	25/Aug/2009
Revision date	12/Jun/2015
Version	5
The following sections have been revised	This SDS have been made in a new database and therefore a new layout. There have been changes with regard to classification, Updated according to GHS/CLP.

Text of R phrases mentioned in Section 3

R43 - May cause sensitization by skin contact
 R65 - Harmful: may cause lung damage if swallowed

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

H317 - May cause an allergic skin reaction
 H304 - May be fatal if swallowed and enters airways

†A mark of M-I L.L.C.

Disclaimer

The information contained herein is considered in good faith as reliable of the date issued and is based upon on measurements, tests or data derived from supplier's own study or furnished by others. In providing this SDS information, Supplier makes no express or implied warranties as to the information or product; merchantability or fitness of purpose; any express or implied warranty; or non-infringement of intellectual property rights; and supplier assumes no responsibility for any direct, special or consequential damages, results obtained, or the activities of others. To the maximum extent permitted by law, supplier's warranty obligations and buyer's sole remedies are as stated in separate agreement between the parties.