



Safety Data Sheet ONE-MUL*

1. Identification of the Substance/Preparation and of the Company/Undertaking

1.1 Product identifier

Product name ONE-MUL*
Product code PID16893

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
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: 1-780-955-3388

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

Serious eye damage/eye irritation	Category 2
Skin sensitization	Category 1

Environmental hazards Not classified

Physical Hazards

Flammable Liquids	Category 4
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2.2 Label elements



Signal word
WARNING

Hazard Statements

H317 - May cause an allergic skin reaction
H319 - Causes serious eye irritation
H227 - Combustible liquid

Precautionary Statements

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
P280 - Wear protective gloves and eye/face protection
P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
P331 - Do NOT induce vomiting
P370 + P378 - In case of fire: Use dry sodium carbonate to extinguish
P403 + P235 - Store in a well-ventilated place. Keep cool

Supplementary precautionary statements

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray
P264 - Wash face, hands and any exposed skin thoroughly after handling
P272 - Contaminated work clothing should not be allowed out of the workplace
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P280 - Wear protective gloves
P337 + P313 - If eye irritation persists: Get medical advice/attention
P363 - Wash contaminated clothing before reuse
P501 - Dispose of contents/ container to an approved waste disposal plant

Hazards not otherwise classified

None known

Unknown acute toxicity

0% of the mixture consists of ingredient(s) of unknown toxicity.

3. Composition/information on Ingredients

3.1 Substances

Not applicable

3.2 Mixtures

Chemical Name	CAS No	Weight-%
Fatty acids, tall-oil, reaction products with diethylenetriamine, maleic anhydride,	68990-47-6	60 - 80

tetraethylenepentamine and triethylenetetramine		
Triethylene glycol monobutyl ether	143-22-6	15 - 40
(Hydrocarbons, C-10-C-14, n-alkanes, Isoalkanes <2% aromatics	93924-07-3	10 - 30
Polyethylene glycol monobutyl ether	9004-77-7	1 - 5

Comments

The exact percentage (concentration) of composition has been withheld as a trade secret

4. First Aid Measures

4.1 First aid measures

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	Remove contaminated clothing and shoes. Wash off immediately with soap and plenty of water. Get medical attention if irritation persists. Wash contaminated clothing before re-use.
Eye Contact	Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first five minutes, then continue rinsing eye. Get medical attention.

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

Dry chemical, CO₂, water spray or regular foam.

Extinguishing media which must not be used for safety reasons

Do not use a solid water stream as it may scatter and spread fire.

5.2. Special hazards arising from the substance or mixture

Unusual fire and explosion hazards

Heating of containers may cause pressure rise, with risk of bursting. Vapors may travel considerable distance to source of ignition and flash back. Vapors may form explosive mixtures with air.

Hazardous combustion products

Fire or high temperatures create: Carbon oxides (COx), Nitrogen oxides (NOx).

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

Evacuate and ventilate the area. Use personal protective equipment identified in Section 8. Do not get in eyes, on skin, or on clothing. Do not breathe vapors or spray mist. If spilled, take caution, as material can cause surfaces to become very slippery.

6.2 Environmental precautions

Do not allow material to contaminate ground water system. Large spills released to the environment may disturb the natural chemical balance of soil/fresh water.

Environmental exposure controls

Avoid release to the environment. The product should not be allowed to enter drains, water courses or the soil. 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. Dike to collect large liquid spills.

Methods for cleaning up

Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local/national regulations (see Section 13). Take precautionary measures against static discharges. Use non-sparking tools and equipment.

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, eyes and clothing. Avoid spills and splashing during use. Avoid breathing vapors or mists. If spilled, take caution, as material can cause surfaces to become very slippery. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures/precautions Ensure adequate ventilation.

Storage precautions Keep containers tightly closed in a dry, cool and well-ventilated place. Store in original

container. Follow safe warehousing practices regarding palletizing, banding, shrink-wrapping and/or stacking.

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)
Fatty acids, tall-oil, reaction products with diethylenetriamine, maleic anhydride, tetraethylenepentamine and triethylenetetramine	Not determined	Not determined	Not determined	Not determined	Not determined
Triethylene glycol monobutyl ether	Not determined	Not determined	Not determined	Not determined	Not determined
(Hydrocarbons, C-10-C-14, n-alkanes, Isoalkanes <2% aromatics	Not determined	Not determined	Not determined	Not determined	Not determined
Polyethylene glycol monobutyl ether	Not determined	Not determined	Not determined	Not determined	Not determined

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)
Fatty acids, tall-oil, reaction products with diethylenetriamine, maleic anhydride, tetraethylenepentamine and triethylenetetramine 68990-47-6	-
Triethylene glycol monobutyl ether 143-22-6	-
(Hydrocarbons, C-10-C-14, n-alkanes, Isoalkanes <2% aromatics 93924-07-3	-
Polyethylene glycol monobutyl ether 9004-77-7	-

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, especially in confined areas.

Personal protective equipment

Eye protection

Tightly fitting safety goggles.

Hand protection	Use protective gloves made of: PVC Viton Be aware that liquid may penetrate the gloves. 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 mist/aerosol of this product, use an organic vapor cartridge with a P-95 pre-filter attached. In work environments containing oil mist/aerosol, use an organic vapor cartridge with a P-95 pre-filter attached. If exposed to vapors from this product, use a NIOSH/MSHA-approved respirator with an organic vapor cartridge.
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
Color	Amber
Odor	Slight
Odor threshold	Not applicable

Property	Values	Remarks
pH	No information available	
pH @ dilution	No information available	
Melting / freezing point	No information available	
Boiling point/range	> 86.7 °C / > 188.06 °F	
Flash point	> 68 °C / > 154.4 °F	PMCC
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	0.92 - 0.96 -	
Bulk density	No information available	
Water solubility	Insoluble in water	
Solubility in other solvents	No information available	
Autoignition temperature	No information available	
Decomposition temperature	No information available	
Kinematic viscosity	> 20.5 cSt	@ 40 °C
Dynamic viscosity	No information available	
log Pow	No information available	
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	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 data available.

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

None known.

10.5 Incompatible materials

Strong oxidizing agents.

10.6 Hazardous decomposition products

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

11. Toxicological Information

11.1 Information on toxicological effects

Acute toxicity

Inhalation	Inhalation of vapors in high concentration may cause irritation of respiratory system.
Eye contact	Causes serious eye irritation.
Skin contact	May cause an allergic skin reaction. Repeated exposure may cause skin dryness or cracking.
Ingestion	Ingestion may cause stomach discomfort.

Toxicology data for the components

Chemical Name	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
Triethylene glycol monobutyl ether	= 5300 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	No data available
(Hydrocarbons, C-10-C-14, n-alkanes, Isoalkanes <2% aromatics	> 3990 mg/kg (Rat)	= 3980 mg/kg (Rabbit)	> 5.6 mg/L (Rat) 4 h
Polyethylene glycol monobutyl ether	No data available	No data available	No data available

Chemical Name	IARC Group 1 or 2	ACGIH - Carcinogens	OSHA listed carcinogens	NTP
Fatty acids, tall-oil, reaction products with diethylenetriamine, maleic anhydride, tetraethylenepentamine and triethylenetetramine	No data available	No data available	No data available	No data available
Triethylene glycol monobutyl ether	No data available	No data available	No data available	No data available
(Hydrocarbons, C-10-C-14, n-alkanes, Isoalkanes <2% aromatics	No data available	No data available	No data available	No data available
Polyethylene glycol monobutyl ether	No data available	No data available	No data available	No data available

Sensitization	May cause allergic skin reaction.
Mutagenic effects	No evidence of mutagenic properties.
Carcinogenicity	No evidence of carcinogenic properties.
Reproductive toxicity	No evidence of toxicity to reproduction.
Developmental toxicity	Not known to cause birth defects or have a deleterious effect on a developing fetus.
Routes of exposure	Eye contact. Skin contact. Inhalation.
Routes of entry	Eye contact. Skin contact.
Specific target organ toxicity - Single exposure	Not classified
Specific target organ toxicity - Repeated exposure	Not classified.
Aspiration hazard	Not classified.

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
Fatty acids, tall-oil, reaction products with diethylenetriamine, maleic anhydride, tetraethylenepentamine and triethylenetetramine	No information available	No information available	No information available
Triethylene glycol monobutyl ether	2200 - 4600 mg/L LC50 Leuciscus idus 96 h = 2400 mg/L LC50 Pimephales promelas 96 h	> 500 mg/L EC50 Desmodesmus subspicatus 72 h	> 500 mg/L EC50 Daphnia magna 48 h
(Hydrocarbons, C-10-C-14, n-alkanes, Isoalkanes <2% aromatics	No information available	No information available	= 0.02856 mg/L EC50 Daphnia magna 48 h
Polyethylene glycol monobutyl ether	No information available	No information available	No information available

12.2 Persistence and degradability

The product contains substances which are not expected to be biodegradable.

12.3 Bioaccumulative potential

The product contains potentially bioaccumulating substances.

12.4 Mobility

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

Disposal Method	Disposal should be made in accordance with federal, state and local regulations.
Contaminated packaging	Empty containers may contain flammable or explosive vapors. Do not burn, or use a cutting torch on, the empty drum. Empty containers should be taken for local recycling, recovery or waste disposal.

14. Transport information

14.1. UN number

UN No. (DOT)	NA1993
UN No. (MT/ANTT)	Not regulated
UN No. (TDG)	Not regulated
UN/ID No. (ADR/RID/ADN/ADG)	Not regulated
UN No. (IMDG/ANTAQ)	Not regulated
UN No. (ICAO/ANAC)	Not regulated
UN No. (DPC)	Not regulated

14.2. UN proper shipping name

Combustible liquid, n.o.s., (Hydrocarbons, C-10-C-14, n-alkanes, Isoalkanes <2% aromatics)

Not regulated under TDG, IMDG, ICAO/IATA. Not regulated for U.S. ground transport in non-bulk containers (<119 gallons).

14.3 Hazard class(es)

DOT Hazard class	3
ANTT Hazard class	Not regulated
TDG Hazard class	Not regulated
ADR/RID/ADN/ADG Hazard class	Not regulated
IMDG/ANTAQ Hazard class	Not regulated
ICAO/ANAC Hazard class/division	Not regulated
DPC Hazard class	Not regulated

14.4 Packing group

DOT Packing group	PG III
ANTT Packing group	Not regulated
TDG Packing group	Not regulated
ADR/RID/ADN/ADG Packing group	Not regulated
IMDG/ANTAQ Packing group	Not regulated
ICAO/ANAC Packing group	Not regulated
DPC Packing group	Not regulated

14.5 Environmental hazard

Marine pollutant No

14.6 Special precautions

Not applicable

15. Regulatory Information

International inventories

USA (TSCA)	Complies
Canada (DSL)	Volume restriction. This product contains chemical(s) which is/are not listed on DSL but is/are listed on the NDSL.
Philippines (PICCS)	Does not comply
Japan (ENCS)	Does not comply
China (IECSC)	Does not comply
Australia (AICS)	Does not comply
Korean (KECL)	Complies
New Zealand (NZIoC)	Complies

Europe - REACH

All products supplied from the European Economic Area (EEA) are compliant with the REACH Regulation EC 1907/2006. For products supplied from the EEA, Schlumberger and/or its suppliers have pre-registered and is registering all of the substances that it and/or its suppliers manufactures in or imports into the EEA that are subject to Title II of the REACH Regulation. All products supplied from outside the EEA are subject to REACH only if imported into the EEA. The importer of the products must comply with REACH for each imported substance. Contact REACH@slb.com for REACH information.

IMPORTS, Canada

This product contains chemical(s) which is/are not listed on DSL but is/are listed on the NDSL. Possible import volume restrictions apply. For details contact the Corporate info in SECTION 1.

U.S. Federal and State Regulations

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications. Under the amended regulations at 40 CFR 370, EPCRA 311/312 Tier II reporting for the 2017 calendar year will need to be consistent with updated hazard classifications.

Chemical Name	SARA 302 / TPQs	SARA 313	CERCLA RQ
Fatty acids, tall-oil, reaction products with diethylenetriamine, maleic anhydride, tetraethylenepentamine and triethylenetetramine	N/A	N/A	N/A
Triethylene glycol monobutyl ether	N/A	N/A	N/A
(Hydrocarbons, C-10-C-14, n-alkanes, Isoalkanes <2% aromatics	N/A	N/A	N/A
Polyethylene glycol monobutyl ether	N/A	N/A	N/A

California Proposition 65

This product does not contain chemical[s] which is [are] known to the State of California to cause cancer, birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov

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 Listed
MTE (NR 15) No information available

16. Other Information

Supersedes date 31/Jan/2017
Revision date 14/Jan/2019
Version 9
This SDS has been revised in the following section(s) 1, 3, 11, 12, 14, 15, 16

HMIS classification

Health 2
Flammability 2
Physical hazard 0
PPE X

*A mark of M-I L.L.C.

Disclaimer

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