SDS no. PID11774
Version 14
Revision date 19/Dec/2018
Supersedes date 31/Jan/2017

Safety Data Sheet
SUREMUL*

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

1.1 Product identifier

Product name SUREMUL*

Product code PID11774

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: 1-780-962-8221

E-mail address SDS@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 Sub-Category 1B

Environmental hazards Not classified

Physical Hazards

Flammable Liquids	Category 4

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
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray
P264 - Wash face, hands and any exposed skin thoroughly after handling
P280 - Wear protective gloves and eye/face protection
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
P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
P272 - Contaminated work clothing should not be allowed out of the workplace
P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention
P337 + P313 - If eye irritation persists: Get medical advice/attention
P363 - Wash contaminated clothing before reuse
P370 + P378 - In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish
P403 + P235 - Store in a well-ventilated place. Keep cool

Hazards not otherwise classified
None known

Unknown acute toxicity Not applicable.

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, tetraethylenepentamine and triethylenetetramine	68990-47-6	60 - 80

2-[2-(2-butoxyethoxy)ethoxy]ethanol	143-22-6	15 - 40
Alkanes, C10 - 14	93924-07-3	15 - 40

Comments
The product contains other ingredients which do not contribute to the overall classification. The specific chemical identity and/or 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 — Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Seek medical attention.

Eye Contact — Remove contact lenses, if worn. 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. Seek medical attention for all burns, regardless how minor they may seem.

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
Water Fog, Alcohol Foam, CO_2, Dry Chemical.

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
Combustible liquid. Heating of containers may cause pressure rise, with risk of bursting. Vapors may accumulate in confined areas (basement, tanks, hopper/tank cars, etc.).

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

Do not breathe vapors or spray mist. Avoid contact with the skin and the eyes. Use personal protective equipment. See also section 8. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Solutions extremely slippery when spilled. 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 material 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
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 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. Take precautionary measures against static discharges. Keep away from heat, sparks and open flame. No smoking.

Hygiene measures
Do not eat, drink or smoke during work. Wash thoroughly after handling.

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:. Combustible materials.
Packaging materials	Use specially constructed containers only.

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.
No biological limit allocated

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
2-[2-(2-butoxyethoxy)ethoxy]ethanol	Not determined	Not determined	Not determined	Not determined	Not determined
Alkanes, C10 - 14	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	-
2-[2-(2-butoxyethoxy)ethoxy]ethanol 143-22-6	-
Alkanes, C10 - 14 93924-07-3	-

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

Personal protective equipment

Eye protection Tightly fitting safety goggles.

Hand protection	Impervious gloves made of: Nitrile Neoprene PVC Break through time >480 minutes Glove thickness >=0.4 mm 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	Hydrocarbon-like
Odor threshold	Not applicable

Property	**Values**	**Remarks**
pH		
pH @ dilution		
Melting / freezing point	No information available	
Boiling point/range	> 150 °C / > 302 °F	
Flash point	> 65 °C / > 150 °F	Closed cup
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	0.88 - 0.95	
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	500-1500 cP	@ 25 °C
log Pow	No information available	
Explosive properties	No information available	
Oxidizing properties	No information available	

9.2 Other information

Pour point	No information available
Molecular weight	No information available
VOC content(%)	No information available
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

Avoid contact with heat, sparks, open flame, and static discharge. Do not freeze.

10.5 Incompatible materials

Combustible materials. Oxidizing agents.

10.6 Hazardous decomposition products

See Section 5.2.

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.

Ingestion Ingestion may cause stomach discomfort.

LD50 Oral > 2000 mg/kg (rat) Calculated (Product)

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	> 2020 mg/kg (Rat) Literature data	> 2000 mg/kg (Rat) OECD 402 - Duration: 24h Literature data	No data available
2-[2-(2-butoxyethoxy)ethoxy]ethanol	= 5300 mg/kg (Rat) Literature data	> 2000 mg/kg (Rabbit)	No data available
Alkanes, C10 - 14	> 3990 mg/kg (Rat)	= 3980 mg/kg (Rabbit)	> 5.6 mg/L (Rat) 4 h

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
2-[2-(2-butoxyethoxy)ethoxy]ethanol	No data available	No data available	No data available	No data available
Alkanes, C10 - 14	No data available	No data available	No data available	No data available

Sensitization	May cause sensitization by skin contact.
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.
Developmental toxicity	Not known to cause birth defects or have a deleterious effect on a developing fetus.
Routes of exposure	Skin contact. Eye contact. Inhalation.
Routes of entry	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	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
2-[2-(2-butoxyethoxy)ethoxy]ethanol	2200 - 4600 mg/L LC50 Leuciscus idus 96h = 2400 mg/L LC50 Pimephales promelas 96h	> 500 mg/L EC50 Desmodesmus subspicatus 72h	> 500 mg/L EC50 Daphnia magna 48h
Alkanes, C10 - 14	No information available	No information available	= 0.02856 mg/L EC50 Daphnia magna 48 h

12.2 Persistence and degradability

No product level data available.

12.3 Bioaccumulative potential

No product level data available.

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	Do not re-use empty containers. Empty containers should be taken for local recycling, recovery or waste disposal. Dispose of in accordance with local regulations. Do not burn, or use a cutting torch on, the empty drum. Empty containers may contain flammable or explosive vapors.

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., (contains Hydrocarbons blend),

Not regulated for US ground transport in non-bulk containers (<119 gallons).

14.3 Hazard class(es)

DOT Hazard class	Not regulated
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

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

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)	Complies
Japan (ENCS)	Does not comply
China (IECSC)	Complies
Australia (AICS)	Complies
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
2-[2-(2-butoxyethoxy)ethoxy]ethanol	N/A	N/A	N/A
Alkanes, C10 - 14	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 determined
MTE (NR 15)	No information available

16. Other Information

Supersedes date	31/Jan/2017
Revision date	19/Dec/2018
Version	14
This SDS has been revised in the following section(s)	3, 16

HMIS classification

Health	2
Flammability	2
Physical hazard	0
PPE	X

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