

SDS no. PID173
Version 3
Revision date 29/Nov/2018
Supersedes date 11/Apr/2017



Safety Data Sheet SAFE-SOLV* OM

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

1.1 Product identifier

Product name SAFE-SOLV* OM
Product code PID173

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

Recommended Use Completion fluid additive.
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

Schlumberger Canada, Ltd.
200, 125 - 9th Avenue SE
Calgary, Alberta T2G 0P6, Canada
Telephone: 1-613-992-4624

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

Aspiration toxicity	Category 1
Skin corrosion/irritation	Category 2

Skin sensitization	Category 1
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Environmental hazards

Acute aquatic toxicity	Category 1
Chronic aquatic toxicity	Category 1

Physical Hazards

Flammable Liquids	Category 3
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2.2 Label elements



Signal word

DANGER

Hazard Statements

H304 - May be fatal if swallowed and enters airways
H315 - Causes skin irritation
H317 - May cause an allergic skin reaction
H410 - Very toxic to aquatic life with long lasting effects
H226 - Flammable liquid and vapor

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

P233 - Keep container tightly closed
P240 - Ground/bond container and receiving equipment
P241 - Use explosion-proof electrical/ ventilating/ lighting/ equipment
P242 - Use only non-sparking tools
P243 - Take precautionary measures against static discharge
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
P273 - Avoid release to the environment
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
P303 + P361 + P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention
P362 - Take off contaminated clothing and wash before reuse
P391 - Collect spillage
P403 + P235 - Store in a well-ventilated place. Keep cool
P220 - Keep/Store away from combustible materials

Unknown acute toxicity Not applicable.

3. Composition/information on Ingredients

3.1 Substances

Not applicable

3.2 Mixtures

Chemical Name	CAS No	Weight-%
D-limonene	5989-27-5	60 - 80
Distillates, petroleum, hydrotreated light	64742-47-8	30 - 60
Fatty acids, C14-18 and C16-18 unsaturated, ethoxylated	68154-25-6	1 - 5

Comments

The product contains other ingredients which do not contribute to the overall classification. The exact percentage (concentration) of composition has been withheld as a trade secret

4. First Aid Measures

4.1 First aid measures

Inhalation	Move the exposed person to fresh air at once. If breathing is difficult, (trained personnel should) give oxygen. Get medical attention immediately if symptoms occur.
Ingestion	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. Seek medical attention at once.
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Seek medical attention.
Eye Contact	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.
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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	Aspiration may cause severe lung damage. Evacuate stomach in a way which avoids aspiration.
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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 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

Flammable liquid. Vapors may travel to source of ignition and flash back.

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 personnel to safe areas. Remove all sources of ignition. 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. Dike far ahead of liquid spill for later disposal.

Methods for cleaning up

Take precautionary measures against static discharges. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Use clean non-sparking tools to collect absorbed material. Ground and bond containers when transferring material.

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.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures/precautions

Ensure adequate ventilation. Keep airborne concentrations below exposure limits. Take precautionary measures against static discharges. Use spark-proof tools and explosion-proof equipment. Ensure all equipment is electrically grounded before beginning transfer operations.

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. Keep away from direct sunlight. Avoid contact with: Strong oxidizing agents.

Packaging materials

Use specially constructed containers only. Mild steel.

8. Exposure Controls/Personal Protection

8.1 Control parameters

* Exposure limits apply for "Mineral oil mist": TLV (ACGIH), TWA=5 mg/m³; STEL = 10 mg/m³

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)
D-limonene	Not determined	Not determined	Not determined	Not determined	Not determined
Distillates, petroleum, hydrotreated light	200 mg/m ³ TWA	Not determined	Not determined	Not determined	Not determined
Fatty acids, C14-18 and C16-18 unsaturated, ethoxylated	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)
D-limonene 5989-27-5	-
Distillates, petroleum, hydrotreated light 64742-47-8	-
Fatty acids, C14-18 and C16-18 unsaturated, ethoxylated 68154-25-6	-

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

Use protective gloves made of: Nitrile Neoprene PVC 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

Skin and body protection	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. 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	No information available	
Color	Clear to hazy yellow	
Odor	Pleasant Citrus	
Odor threshold	Not applicable	
Property	Values	Remarks
pH	No information available	
pH @ dilution	~3.5	@ 10g/l
Melting / freezing point	No information available	
Boiling point/range	> 150 °C / > 302 °F	
Flash point	51 °C / 124 °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	No information available	
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	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 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

Not known.

10.4 Conditions to avoid

Avoid heat, flames and other sources of ignition. Keep away from direct sunlight. Take precautionary measures against static charges.

10.5 Incompatible materials

Strong oxidizing agents.

10.6 Hazardous decomposition products

See Section 5.2.

11. Toxicological Information

11.1 Information on toxicological effects

Acute toxicity

Inhalation

Vapors may irritate throat and respiratory system. May cause additional affects as listed under "Ingestion".

Eye contact

Contact with eyes may cause irritation.

Skin contact

Causes skin irritation. May cause an allergic skin reaction. Repeated exposure may cause skin dryness or cracking.

Ingestion

May be fatal if swallowed and enters airways.

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
D-limonene	= 5200 mg/kg (Rat) = 4400 mg/kg (Rat)	> 5 g/kg (Rabbit)	No data available
Distillates, petroleum, hydrotreated light	> 5000 mg/kg (Rat)	2000 mg/kg (Rabbit)	> 5.2 mg/L (Rat) 4 h
Fatty acids, C14-18 and C16-18 unsaturated, ethoxylated	No data available	No data available	No data available

Chemical Name	IARC Group 1 or 2	ACGIH - Carcinogens	OSHA listed carcinogens	NTP
D-limonene	No data available	No data available	No data available	No data available
Distillates, petroleum, hydrotreated light	No data available	No data available	No data available	No data available
Fatty acids, C14-18 and C16-18 unsaturated, ethoxylated	No data available	No data available	No data available	No data available

Sensitization

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.

Developmental toxicity	Not known to cause birth defects or have a deleterious effect on a developing fetus.
Routes of exposure	Ingestion. Skin contact.
Routes of entry	Ingestion. Skin contact.
Specific target organ toxicity - Single exposure	Not classified
Specific target organ toxicity - Repeated exposure	Not classified.
Aspiration hazard	May be fatal if swallowed and enters airways.

12. Ecological Information

12.1 Toxicity

Toxicity to algae

See component information below.

Toxicity to fish

See component information below.

Toxicity to daphnia and other aquatic invertebrates

See component information below.

Chemical Name	Toxicity to fish	Toxicity to algae	Toxicity to daphnia and other aquatic invertebrates
D-limonene	= 35 mg/L LC50 Oncorhynchus mykiss 96 h 0.619 - 0.796 mg/L LC50 Pimephales promelas 96 h	No information available	No information available
Distillates, petroleum, hydrotreated light	= 45 mg/L LC50 Pimephales promelas 96 h = 2.2 mg/L LC50 Lepomis macrochirus 96 h = 2.4 mg/L LC50 Oncorhynchus mykiss 96 h	No information available	= 4720 mg/L LC50 Den-dronereides heteropoda 96 h
Fatty acids, C14-18 and C16-18 unsaturated, ethoxylated	No information available	No information available	No information available

12.2 Persistence and degradability

Not readily biodegradable.

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	Empty containers should be taken for local recycling, recovery or waste disposal.

14. Transport information

14.1. UN number

UN No. (DOT)	UN2052
UN No. (MT/ANTT)	UN2052
UN No. (TDG)	UN2052
UN/ID No. (ADR/RID/ADN/ADG)	UN2052
UN No. (IMDG/ANTAQ)	UN2052
UN No. (ICAO/ANAC)	UN2052
UN No. (DPC)	Not regulated

14.2. UN proper shipping name

DIPENTENE,

14.3 Hazard class(es)

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

14.4 Packing group

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



14.5 Environmental hazard

Marine pollutant Yes, (D-limonene)

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

15. Regulatory Information

International inventories

USA (TSCA)	Complies
Canada (DSL)	Complies
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.

IMPORTS, Canada

No import volume restrictions.

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
D-limonene	N/A	N/A	N/A
Distillates, petroleum, hydrotreated light	N/A	N/A	N/A
Fatty acids, C14-18 and C16-18 unsaturated, ethoxylated	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 11/Apr/2017
Revision date 29/Nov/2018
Version 3
This SDS has been revised in the following section(s) 1, 3, 8, 11, 12, 15, 16

HMIS classification

Health	2
Flammability	3
Physical hazard	0
PPE	X

N/A - Not Applicable, N/D - Not Determined.

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