



Safety Data Sheet PIPE-LAX*

1. Identification

1.1 Product identifier

Product name PIPE-LAX*
Product code PID1206

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

Recommended Use Drilling 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

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

Aspiration toxicity	Category 1
Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 1
Carcinogenicity	Category 2
Specific target organ toxicity - Repeated exposure	Category 2

Environmental hazards

Chronic aquatic toxicity	Category 2
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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
H318 - Causes serious eye damage
H332 - Harmful if inhaled
H351 - Suspected of causing cancer
H373 - May cause damage to organs through prolonged or repeated exposure
H411 - Toxic to aquatic life with long lasting effects
H226 - Flammable liquid and vapor

Precautionary statements

P280 - Wear protective gloves/protective clothing/eye protection/face protection
P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower
P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P310 - Immediately call a POISON CENTER or doctor/physician

Supplementary precautionary statements

P201 - Obtain special instructions before use
P202 - Do not handle until all safety precautions have been read and understood
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
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
P260 - Do not breathe dust/fume/gas/mist/vapors/spray
P264 - Wash face, hands and any exposed skin thoroughly after handling
P271 - Use only outdoors or in a well-ventilated area
P273 - Avoid release to the environment
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
P308 + P313 - IF exposed or concerned: Get medical advice/attention
P314 - Get medical advice/attention if you feel unwell
P331 - Do NOT induce vomiting

P332 + P313 - If skin irritation occurs: Get medical advice/attention
P362 - Take off contaminated clothing and wash before reuse
P370 + P378 - In case of fire: Use dry sodium carbonate to extinguish
P391 - Collect spillage
P403 + P235 - Store in a well-ventilated place. Keep cool
P501 - Dispose of contents/container in accordance with local regulations.

Hazards not otherwise classified

None known

Unknown acute toxicity 12% of the mixture consists of ingredient(s) of unknown toxicity.

12 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

3. Composition/information on Ingredients

3.1 Substances

Not applicable

3.2 Mixtures

Chemical Name	CAS No	Weight-%
Fuel oil, no. 2	68476-30-2	60 - 100
4,4(5H)-Oxazolidimethanol, 2-(heptadecenyl)-	28984-69-2	5 - 10
Butan-1-ol	71-36-3	5 - 10
Soybean oil	8001-22-7	1 - 5
Naphthalene	91-20-3	<0.1

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	If inhaled, remove from area to fresh air. Get medical attention if respiratory irritation develops or if breathing becomes difficult.
Ingestion	Rinse mouth. If swallowed, do not induce vomiting - seek medical advice. Call a physician or Poison Control Centre immediately. Never give anything by mouth to an unconscious person. Seek medical attention.
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Seek medical attention if irritation occurs.
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. Seek medical attention at once.

4.2. Most important symptoms and effects, both acute and delayed 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	Aspiration may cause severe lung damage. Evacuate stomach in a way which avoids aspiration. Keep victim under observation
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5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water spray, dry chemical, carbon dioxide (CO₂), or 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 **Special hazards arising from the substance or mixture**

Unusual fire and explosion hazards

Flammable liquid. Vapors are heavier than air and may spread along floors. Vapors may travel to source of ignition and flash back. Vapors may form explosive mixtures with air. Heating of containers may cause pressure rise, with risk of bursting.

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

Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. 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

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). Ground and bond containers when transferring

material. 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. Take precautionary measures against static discharges.

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.

Storage precautions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from direct sunlight. Avoid heat, flames and other sources of ignition. Avoid contact with:
Oxidizing agents

Packaging materials Use specially constructed containers only.

8. Exposure controls/personal protection

8.1 Control parameters

Chemical Name	ACGIH TLV	OSHA PEL
Fuel oil, no. 2	100 mg/m ³	Not determined
4,4(5H)-Oxazoledimethanol, 2-(heptadecenyl)-	Not determined	Not determined
Butan-1-ol	20 ppm	100 ppm TWA 300 mg/m ³ TWA
Soybean oil	Not determined	Not determined
Naphthalene	10 ppm	10 ppm TWA 50 mg/m ³ TWA

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

Respiratory Protection	Break through time >480 minutes Glove thickness 0.4 mm Be aware that liquid may penetrate the gloves. Frequent change is advisable. 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	Transparent	
Color	Red - Amber	
Odor	Hydrocarbon-like	
Odor threshold	Not applicable	
Property	Values	Remarks
pH		
pH @ dilution		
Melting / freezing point	No information available	
Boiling point/range	> 100 °C / > 212 °F	
Flash point	42 °C / 108 °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	0.9 - 1.0	
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 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 that do not constitute product specification. Please refer to Technical Data Sheet for specifications.

10. Stability and reactivity

10.1 Reactivity

FLAMMABLE LIQUID AND VAPOR.

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. Avoid strong sunlight.

10.5 Incompatible materials

Oxidizing agents.

10.6 Hazardous decomposition products

See Section 5.2.

11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product information

Suspected of causing cancer.

Inhalation

Harmful by inhalation. May cause additional affects as listed under "Ingestion".

Eye contact

Causes serious eye damage.

Skin contact

Causes skin irritation. May be absorbed through the skin in harmful amounts.

Ingestion

May be fatal if swallowed and enters airways.

LD50 Oral

> 2000 mg/kg (rat) Calculated (PRODUCT)

Toxicology data for the components

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Fuel oil, no. 2	= 12 g/kg (Rat)	LD50 Rabbit: 4720 ul/kg	LC50 Rat: 4.6 mg/l
4,4(5H)-Oxazoledimethanol, 2-(heptadecenyl)-	No data available	No data available	No data available
Butan-1-ol	= 790 mg/kg (Rat) = 700 mg/kg (Rat)	= 3402 mg/kg (Rabbit) = 3400 mg/kg (Rabbit)	> 8000 ppm (Rat) 4 h
Soybean oil	No data available	No data available	No data available
Naphthalene	= 1110 mg/kg (Rat) = 490 mg/kg (Rat)	> 20 g/kg (Rabbit) = 1120 mg/kg (Rabbit)	> 340 mg/m ³ (Rat) 1 h

Chemical Name	IARC Group 1 or 2	ACGIH - Carcinogens	OSHA listed carcinogens	NTP
Fuel oil, no. 2	No data available	A3 Confirmed Animal Carcinogen with Unknown Relevance to Humans	No data available	No data available
4,4(5H)-Oxazoledimethanol, 2-(heptadecenyl)-	No data available	No data available	No data available	No data available

Butan-1-ol	No data available	No data available	No data available	No data available
Soybean oil	No data available	No data available	No data available	No data available
Naphthalene	Group 2B; Monograph 82 [2002] 2B	A3 Confirmed Animal Carcinogen with Unknown Relevance to Humans	Present	Reasonably Anticipated To Be A Human Carcinogen

Sensitization	Not classified.
Mutagenic effects	This product does not contain any known or suspected mutagens.
Carcinogenicity	Contains a known or suspected carcinogen.
Reproductive toxicity	Conclusive but not sufficient for classification.
Developmental toxicity	Contains ingredients that have suspected developmental hazards.
Routes of exposure	Inhalation. Ingestion. Eye contact. Skin contact.
Routes of entry	Inhalation. Ingestion. Eye contact. Skin absorption.
Specific target organ toxicity - Single exposure	Not classified
Specific target organ toxicity - Repeated exposure	Category 2.
Target organ effects	Thymus. Liver. Bone marrow.
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
Fuel oil, no. 2	= 35 mg/L LC50 Pimephales promelas 96 h	No information available	No information available
4,4(5H)-Oxazoledimethanol, 2-(heptadecenyl)-	No information available	No information available	No information available
Butan-1-ol	= 1740 mg/L LC50 Pimephales promelas 96 h 100000 - 500000 µg/L LC50 Lepomis macrochirus 96 h = 1910000 µg/L LC50 Pimephales promelas 96 h 1730 - 1910 mg/L LC50 Pimephales promelas 96 h	> 500 mg/L EC50 Desmodesmus subspicatus 72 h > 500 mg/L EC50 Desmodesmus subspicatus 96 h	1897 - 2072 mg/L EC50 Daphnia magna 48 h = 1983 mg/L EC50 Daphnia magna 48 h
Soybean oil	No information available	No information available	No information available
Naphthalene	= 31.0265 mg/L LC50 Lepomis macrochirus 96 h 0.91 - 2.82 mg/L LC50 Oncorhynchus mykiss 96 h = 1.6 mg/L LC50 Oncorhynchus mykiss 96 h 5.74 - 6.44 mg/L LC50	= 0.4 mg/L EC50 Skeletonema costatum 72 h	= 2.16 mg/L LC50 Daphnia magna 48 h = 1.96 mg/L EC50 Daphnia magna 48 h 1.09 - 3.4 mg/L EC50 Daphnia magna 48 h

	Pimephales promelas 96 h = 1.99 mg/L LC50 Pimephales promelas 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

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

Vietnam: Decree No. 104/2009/ND-CP dated 09/11/2009 of the Government providing for the list of dangerous goods and the transport of dangerous goods by road motor vehicles

Vietnam: Decree No 29/2005/NĐ-CP dated 10/3/2005 of the Government on the list of dangerous goods and the transport of dangerous goods on inland waterways

14.1. UN number

UN No. (DOT)	UN1993
UN No. (TDG)	UN1993
UN/ID No. (ADR/RID/ADN/ADG)	UN1993
UN No. (IMDG)	UN1993
UN No. (ICAO)	UN1993

14.2. UN proper shipping name

FLAMMABLE LIQUID, N.O.S.
(Fuel oil, no. 2 and Butan-1-ol)

14.3 Hazard class(es)

DOT Hazard class

TDG Hazard class 3
ADR/RID/ADN/ADG Hazard class 3
IMDG Hazard class 3
ICAO Hazard class/division 3

14.4 Packing group

DOT Packing group PG III
TDG Packing group PG III
ADR/RID/ADN/ADG Packing group PG III
IMDG Packing group PG III
ICAO Packing group PG III



14.5 Environmental hazard

Marine pollutant Yes, (Fuel Oil)

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
European Union (EINECS and ELINCS)	Complies
Philippines (PICCS)	Complies
Japan (ENCS)	Does not Comply
China (IECSC)	Complies
Australia (AICS)	Complies
Korean (KECL)	Complies
New Zealand (NZIoC)	Complies

IMPORTS, Canada

No import volume restrictions.

U.S. Federal and State Regulations

SARA 311/312 Hazard Categories

Fire hazard. Immediate (acute) health hazard. Delayed (chronic) health hazard.

Chemical Name	SARA 302 / TPQs	SARA 313	CERCLA RQ
Fuel oil, no. 2	N/A	N/A	N/A
4,4(5H)-Oxazolidimethanol, 2-(heptadecenyl)-	N/A	N/A	N/A
Butan-1-ol	N/A	1.0 %	5000 lb final RQ

			2270 kg final RQ
Soybean oil	N/A	N/A	N/A
Naphthalene	N/A	0.1 %	100 lb final RQ 45.4 kg final RQ

State Comments

Proposition 65: This product contains chemical(s) considered by the State of California's Safe Drinking Water and Toxic Enforcement Act of 1986 to cause cancer and/or reproductive toxicity. See table under U.S. Federal and State Regulations for the specific chemicals.

Naphthalene

carcinogen

Benzene

developmental toxicity
male reproductive toxicity
carcinogen

Canadian Classification

This Safety Data Sheet has been prepared in compliance with the Hazardous Products Regulations.

HMIRA Registration Number: 11303

Filing Date:

08/May/2017

16. Other information

Supersedes date 02/Sep/2015

Revision date 28/Mar/2017

Version 16

This SDS has been revised in the following section(s) 2, 3, 7, 8, 11, 15, 16. Product Code change No changes with regard to classification have been made.

HMIS classification

*A mark of M-I L.L.C., a Schlumberger Company

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