SDS no. PID10622
Version 2
Revision date 17/Jan/2019
Supersedes date None

Safety Data Sheet
DRILPLEX* HDD

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

1.1 Product identifier

Product name DRILPLEX* HDD

Product code PID10622

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

Recommended Use Rheology modifier.

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

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

Environmental hazards Not classified

Physical Hazards Not classified

2.2 Label elements

Signal word
DANGER

Hazard Statements
H315 - Causes skin irritation
H318 - Causes serious eye damage

Precautionary Statements
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P302 + P352 - IF ON SKIN: Wash with plenty of water and soap
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
P332 + P313 - If skin irritation occurs: Get medical advice/attention
P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable

Supplementary precautionary statements
P264 - Wash face, hands and any exposed skin thoroughly after handling
P362 + P364 - Take off contaminated clothing and wash it before reuse

Unknown acute toxicity Not applicable.

3. Composition/information on Ingredients

3.1 Substances

Not applicable

3.2 Mixtures

Chemical Name	CAS No	Weight-%
Sodium carbonate	497-19-8	30 - 60
Magnesium compound	Proprietary	30 - 60
Calcium hydroxide	1305-62-0	15 - 40
Aluminium compound	Proprietary	15 - 40

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 — Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get medical attention immediately if symptoms occur.

Eye Contact — Promptly wash eyes with lots of water while lifting eye lids. Remove contact lenses, if present and easy to do. Continue rinsing. 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.

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
None known.

Hazardous combustion products
Carbon dioxide (CO2).

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

Disposal should be in accordance with applicable regional, national and local laws and regulations. Refer to applicable federal, state and local regulations.

Environmental exposure controls
Local authorities should be advised if significant spillages cannot be contained.

6.3 Methods and material for containment and cleaning up

Methods for containment
Cover powder spill with plastic sheet or tarp to minimize spreading. Prevent further leakage or spillage if safe to do so.

Methods for cleaning up
Sweep up and shovel into suitable containers for 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. Avoid dust formation.

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. Protect from moisture. Avoid contact with:. Acids.

Packaging materials Use specially constructed containers only.

8. Exposure Controls/Personal Protection

8.1 Control parameters

Component Information

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)
Sodium carbonate	Not determined	Not determined	Not determined	Not determined	Not determined
Magnesium compound	10 mg/m³	15 mg/m³ TWA	10 mg/m³ TWA	Not determined	10 mg/m³ TWA VLE-PPT (fume, as Mg)
Calcium hydroxide	5 mg/m³	15 mg/m³ TWA 5 mg/m³ TWA	5 mg/m³ TWA	Not determined	5 mg/m³ TWA VLE-PPT
Aluminium compound	Not determined	15 mg/m³ TWA 5 mg/m³ TWA	10 mg/m³ TWA	Not determined	10 mg/m³ TWA VLE-PPT

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)
Sodium carbonate 497-19-8	-
Magnesium compound	750 mg/m³ IDLH (fume)
Calcium hydroxide 1305-62-0	-
Aluminium compound	-

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. Mechanical ventilation or local exhaust ventilation is required.

Personal protective equipment

Eye protection	Tightly fitting safety goggles. Face-shield.
Hand protection	Use protective gloves made of: Nitrile Neoprene 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	Solid
Appearance	Powder Dust
Color	Off-white
Odor	Odorless
Odor threshold	Not applicable

Property	Values	Remarks
pH		

pH @ dilution	10-11	@ 1%
Melting / freezing point	No information available	
Boiling point/range	No information available	
Flash point	No information available	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	2.8 - 3.1 sg	@ 20 °C
Bulk density	650-800 kg/m³ / 35-45 lb/cu.ft	
Water solubility	Miscible with water.	
Solubility in other solvents	No information available	
Autoignition temperature	No information available	
Decomposition temperature	No information available	
Kinematic viscosity	No information available	
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 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 polymerization does not occur.

10.4 Conditions to avoid

Protect from moisture.

10.5 Incompatible materials

Acids.

10.6 Hazardous decomposition products

See Section 5.2.

11. Toxicological Information

11.1 Information on toxicological effects

Acute toxicity

Inhalation Inhalation of dust in high concentration may cause irritation of respiratory system.

Eye contact Causes serious eye damage.

Skin contact Causes skin irritation.

Ingestion Ingestion may cause stomach discomfort.

Toxicology data for the components

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Sodium carbonate	= 4090 mg/kg (Rat)	No data available	No data available
Magnesium compound	= 3870 mg/kg (Rat) = 3990 mg/kg (Rat)	No data available	No data available
Calcium hydroxide	= 7340 mg/kg (Rat)	No data available	No data available
Aluminium compound	> 5000 mg/kg (Rat)	No data available	No data available

Chemical Name	IARC Group 1 or 2	ACGIH - Carcinogens	OSHA listed carcinogens	NTP
Sodium carbonate	No data available	No data available	No data available	No data available
Magnesium compound	No data available	A4 Not Classifiable as a Human Carcinogen	No data available	No data available
Calcium hydroxide	No data available	No data available	No data available	No data available
Aluminium compound	No data available	No data available	No data available	No data available

Sensitization This product does not contain any components suspected to be sensitizing.

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 Eye contact. Skin contact.

Routes of entry No route of entry noted.

Specific target organ toxicity - Single exposure Not classified

Specific target organ toxicity - Repeated exposure Not classified.

Aspiration hazard Not applicable.

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
Sodium carbonate	310 - 1220 mg/L LC50 Pimephales promelas 96 h = 300 mg/L LC50 Lepomis macrochirus 96 h	= 242 mg/L EC50 Nitzschia 120 h	= 265 mg/L EC50 Daphnia magna 48 h
Magnesium compound	No information available	No information available	No information available
Calcium hydroxide	= 160 mg/L LC50 Gambusia affinis 96 h	No information available	No information available
Aluminium compound	No information available	No information available	No information available

12.2 Persistence and degradability

Not Applicable - Inorganic chemical. See component information below.

12.3 Bioaccumulative potential

Not Applicable - Inorganic chemical. See component information below.

12.4 Mobility

The product is miscible with water. May spread in water systems. See component information below.

See component information below.

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) Not regulated
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

The product is not covered by international regulation on the transport of dangerous goods

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	Not regulated
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)	Complies
Philippines (PICCS)	Complies
Japan (ENCS)	Complies
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.

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
Sodium carbonate	N/A	N/A	N/A
Magnesium compound	N/A	N/A	N/A
Calcium hydroxide	N/A	N/A	N/A
Aluminium compound	N/A	1.0 %	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

Revision date 17/Jan/2019

Version 2

This SDS has been revised in the following section(s) All sections. There have been changes with regard to classification.

HMIS classification

Health	3
Flammability	0
Physical hazard	0
PPE	X

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