

SAFETY DATA SHEET



Drill-Thin® Thinner

Version 1.6

Revision Date 2017-06-22

according to GB/T 16483 and GB/T 17519

SECTION 1: Identification of the substance/mixture and of the company/undertaking

Product information

Product Name : Drill-Thin® Thinner
Material : 1016816

Use : Drilling Mud Additive

Company : Chevron Phillips Chemical Company LP
Drilling Specialties Company LLC
10001 Six Pines Drive
The Woodlands, TX 77380

Local : See Company Address

Emergency telephone:

Health:

866.442.9628 (North America)

1.832.813.4984 (International)

Transport:

CHEMTREC 800.424.9300 or 703.527.3887(int'l)

Asia: CHEMWATCH (+612 9186 1132) China: 0532 8388 9090

EUROPE: BIG +32.14.584545 (phone) or +32.14583516 (telefax)

Mexico CHEMTREC 01-800-681-9531 (24 hours)

South America SOS-Cotec Inside Brazil: 0800.111.767 Outside Brazil: +55.19.3467.1600

Argentina: +(54)-1159839431

Responsible Department : Product Safety and Toxicology Group
E-mail address : SDS@CPChem.com
Website : www.CPChem.com

SECTION 2: Hazards identification

Classification of the substance or mixture

GHS Classification and Labeling: Follow GB 13690, GB 15258 and GB 30000.2 to GB 30000.29 (GHS 2011)

Emergency Overview

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Danger**Form:** Powder **Physical state:** Solid **Color:** Brown **Odor:** Odorless

Hazards : May be harmful if swallowed. Causes skin irritation. Causes serious eye irritation. May cause cancer. Harmful to aquatic life with long lasting effects. May cause cancer by inhalation. Toxic to aquatic life. Toxic to aquatic life with long lasting effects.

Classification

: Acute toxicity, Category 5, Oral
 Skin corrosion/irritation, Category 2
 Serious eye damage/eye irritation, Category 2A
 Carcinogenicity, Category 1A
 Chronic aquatic toxicity, Category 3
 Carcinogenicity, Category 1A, Inhalation
 Acute aquatic toxicity, Category 2
 Chronic aquatic toxicity, Category 2

Labeling**Symbol(s)****Signal Word**

: Danger

Hazard Statements

: H303: May be harmful if swallowed.
 H315: Causes skin irritation.
 H319: Causes serious eye irritation.
 H350i: May cause cancer by inhalation.
 H411: Toxic to aquatic life with long lasting effects.

Precautionary Statements

: **Prevention:**
 P201: Obtain special instructions before use.
 P202: Do not handle until all safety precautions have been read and understood.
 P264: Wash skin thoroughly after handling.
 P273: Avoid release to the environment.
 P280: Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response:
 P302 + P352: IF ON SKIN: Wash with plenty of 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.
 P312: Call a POISON CENTER/doctor if you feel unwell.
 P332 + P313: If skin irritation occurs: Get medical advice/ attention.
 P337 + P313: If eye irritation persists: Get medical advice/ attention.
 P362 + P364: Take off contaminated clothing and wash it before reuse.
 P391: Collect spillage.
Storage:
 P405: Store locked up.
Disposal:
 P501: Dispose of contents/ container to an approved waste

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disposal plant.

SECTION 3: Composition/information on ingredients

Synonyms : Drilling Mud Additive

Molecular formula : Mixture

Chemical name	CAS-No. / EINECS-No.	Concentration [wt%]
Sulfomethylated Quebracho	68201-64-9	50 - 80
Ferrous Sulfate	17375-41-6	5 - 9
Stannous Sulfate	7488-55-3	3 - 7
Crystalline Silica	14808-60-7	0.1 - 1

SECTION 4: First aid measures

General advice : Move out of dangerous area. Show this material safety data sheet to the doctor in attendance.

If inhaled : If unconscious, place in recovery position and seek medical advice. If symptoms persist, call a physician.

In case of skin contact : If skin irritation persists, call a physician. If on skin, rinse well with water. If on clothes, remove clothes.

In case of eye contact : Immediately flush eye(s) with plenty of water. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.

If swallowed : Induce vomiting immediately and call a physician. Keep respiratory tract clear. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Take victim immediately to hospital.

SECTION 5: Firefighting measures

Flash point : Not applicable

Autoignition temperature : No data available

Unsuitable extinguishing media : High volume water jet.

Specific hazards during fire fighting : Do not allow run-off from fire fighting to enter drains or water courses. Risks of ignition followed by flame propagation or secondary explosions can be caused by the accumulation of dust, e.g. on floors and ledges.

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| Special protective equipment for fire-fighters | : | Wear self-contained breathing apparatus for firefighting if necessary. |
| Further information | : | Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. |
| Fire and explosion protection | : | Avoid dust formation. Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. Provide appropriate exhaust ventilation at places where dust is formed. |
| Hazardous decomposition products | : | Carbon oxides. Sulfur oxides. |

SECTION 6: Accidental release measures

- | | | |
|---------------------------|---|--|
| Personal precautions | : | Use personal protective equipment. Avoid dust formation. Avoid breathing dust. |
| Environmental precautions | : | Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities. |
| Methods for cleaning up | : | Pick up and arrange disposal without creating dust. Clean up promptly by sweeping or vacuum. Keep in suitable, closed containers for disposal. |
| Additional advice | : | Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). |

SECTION 7: Handling and storage**Handling**

- | | | |
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| Advice on safe handling | : | Avoid formation of respirable particles. Do not breathe vapors/dust. Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Dispose of rinse water in accordance with local and national regulations. Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding may be necessary, but may not by themselves be sufficient. |
| Advice on protection against fire and explosion | : | Avoid dust formation. Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. Provide appropriate exhaust ventilation at places where dust is formed. |

Storage

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Requirements for storage areas and containers : Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards.

SECTION 8: Exposure controls/personal protection**Ingredients with workplace control parameters****CN**

Ingredients	Basis	Value	Control parameters	Note
Crystalline Silica	GBZ 2.1-2007	PC-TWA	0.7 mg/m3	G1, Respirable
	GBZ 2.1-2007	PC-TWA	1 mg/m3	G1, Total
	GBZ 2.1-2007	PC-TWA	0.2 mg/m3	G1, Respirable
	GBZ 2.1-2007	PC-TWA	0.5 mg/m3	G1, Total
	GBZ 2.1-2007	PC-TWA	0.3 mg/m3	G1, Respirable
	GBZ 2.1-2007	PC-TWA	0.7 mg/m3	G1, Total
	GBZ 2.1-2007	PC-TWA	0.5 mg/m3	G1, Total dust
	GBZ 2.1-2007	PC-TWA	0.2 mg/m3	G1, (respirable dust)
	GBZ 2.1-2007	PC-TWA	0.7 mg/m3	G1, Total dust
	GBZ 2.1-2007	PC-TWA	0.3 mg/m3	G1, (respirable dust)
	GBZ 2.1-2007	PC-TWA	1 mg/m3	G1, Total dust
	GBZ 2.1-2007	PC-TWA	0.7 mg/m3	G1, (respirable dust)

G1 G1 - Carcinogenic to humans

Engineering measures

Adequate ventilation to control airborne concentrations below the exposure guidelines/limits. Consider the potential hazards of this material (see Section 2), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

Personal protective equipment

Respiratory protection : Wear a supplied-air NIOSH approved respirator unless ventilation or other engineering controls are adequate to maintain minimal oxygen content of 19.5% by volume under normal atmospheric pressure. Wear a NIOSH approved respirator that provides protection when working with this material if exposure to harmful levels of airborne material may occur, such as: Air-Purifying Respirator for Dusts and Mists / P100. Use a positive pressure, air-supplying respirator if there is potential for uncontrolled release, exposure levels are not known, or other circumstances where air-purifying respirators may not provide adequate protection.

Hand protection : The suitability for a specific workplace should be discussed with the producers of the protective gloves. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Eye protection : Eye wash bottle with pure water. Safety glasses.

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Skin and body protection : Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. Wear as appropriate:. Protective suit. Safety shoes.

Hygiene measures : When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

SECTION 9: Physical and chemical properties**Information on basic physical and chemical properties****Appearance**

Form : Powder
 Physical state : Solid
 Color : Brown
 Odor : Odorless
 Odor Threshold : Not applicable

Safety data

Flash point : Not applicable

Lower explosion limit : Not applicable

Upper explosion limit : Not applicable

Oxidizing properties : No

Autoignition temperature : No data available

Thermal decomposition : No data available

Molecular formula : Mixture

Molecular weight : Not applicable

pH : No data available

Freezing point : No data available

Pour point : No data available

Boiling point/boiling range : Not applicable

Vapor pressure : Not applicable

Relative density : 1.5
at 15.6 °C (60.1 °F)

Density : No data available

Water solubility : Completely Soluble

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Partition coefficient: n-octanol/water : No data available
Viscosity, kinematic : Not applicable
Relative vapor density : Not applicable
Evaporation rate : Not applicable

SECTION 10: Stability and reactivity

Chemical stability : This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

Possibility of hazardous reactions

Conditions to avoid : Generation of Dusts.
Materials to avoid : Avoid contact with strong oxidizing agents.
Thermal decomposition : No data available
Hazardous decomposition products : Carbon oxides
Sulfur oxides
Other data : No decomposition if stored and applied as directed.

SECTION 11: Toxicological information

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Acute oral toxicity : Acute toxicity estimate: 3,281 mg/kg
Method: Calculation method

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Acute dermal toxicity : No data available

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Skin irritation : Skin irritation

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Eye irritation : Eye irritation

Repeated dose toxicity

Sulfomethylated Quebracho : Species: Rat, male
Sex: male
Application Route: oral gavage
Dose: 100, 300, 1000 mg/kg
Exposure time: 32 d

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Number of exposures: Daily
 NOEL: 1,000 mg/kg
 Method: OECD Guideline 422
 No adverse effects expected

Species: Rat, female
 Sex: female
 Application Route: oral gavage
 Dose: 100, 300, 1000 mg/kg
 Exposure time: 39 - 47 d
 Number of exposures: Daily
 NOEL: 1,000 mg/kg
 Method: OECD Guideline 422
 No adverse effects expected

Reproductive toxicity

Sulfomethylated Quebracho : Species: Rat
 Sex: male
 Application Route: oral gavage
 Dose: 100, 300, 1000 mg/kg
 Exposure time: 32 d
 Number of exposures: Daily
 Method: OECD Guideline 422
 NOAEL Parent: 1,000 mg/kg
 Fertility and developmental toxicity tests did not reveal any effect on reproduction.

Species: Rat
 Sex: female
 Application Route: oral gavage
 Dose: 100, 300, 1000 mg/kg
 Exposure time: 39 - 47 d
 Number of exposures: Daily
 Method: OECD Guideline 422
 NOAEL Parent: 1,000 mg/kg
 NOAEL F1: 1,000 mg/kg
 Fertility and developmental toxicity tests did not reveal any effect on reproduction.

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Aspiration toxicity**

: No aspiration toxicity classification.

CMR effects

Crystalline Silica : Carcinogenicity: Human carcinogen.

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Further information**

: No data available.

SECTION 12: Ecological information**Toxicity to fish**

Sulfomethylated Quebracho : LL50: > 1,800 mg/l
 Exposure time: 96 h
 Species: *Scophthalmus maximus* (Flatfish, Flounder)

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Method: OECD Test Guideline 203

Ferrous Sulfate

LL50: > 6.25 mg/l
 Exposure time: 96 h
 Species: Cyprinodon variegatus (sheepshead minnow)
 Method: OECD Test Guideline 203

Stannous Sulfate

> 0.0625 mg/l
 Exposure time: 96 h
 Species: Cyprinodon variegatus (sheepshead minnow)
 static test Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates

Sulfomethylated Quebracho

: EL50: 73.2 mg/l
 Exposure time: 48 h
 Species: Acartia tonsa (Marine Copepod)
 Method: ISO TC147/SC5/WG2

Ferrous Sulfate

LC50: 190 mg/l
 Exposure time: 48 h
 Species: Acartia tonsa (Marine Copepod)

Stannous Sulfate

EC50: 230 mg/l
 Species: Acartia tonsa (Marine Copepod)
 Method: ISO TC147/SC5/WG2

Toxicity to algae

Sulfomethylated Quebracho

: ErC50: > 100 mg/l
 Exposure time: 72 h
 Species: Desmodesmus subspicatus (green algae)
 Method: OECD Test Guideline 201

EbC50: 79 mg/l
 Exposure time: 72 h
 Species: Desmodesmus subspicatus (green algae)
 Method: OECD Test Guideline 201

Ferrous Sulfate

EL50: 45 mg/l
 Exposure time: 72 h
 Species: Skeletonema costatum (Marine Algae)

Stannous Sulfate

EC50: 0.55 mg/l
 Exposure time: 72 h
 Species: Skeletonema costatum (Marine Algae)
 Method: ISO 10253

Elimination information (persistence and degradability)

Biodegradability

: Expected to be inherently biodegradable.

Ecotoxicology Assessment

Acute aquatic toxicity

Sulfomethylated Quebracho : Harmful to aquatic life.

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Stannous Sulfate : Very toxic to aquatic life.

Chronic aquatic toxicity
Sulfomethylated Quebracho : Harmful to aquatic life with long lasting effects.

Additional ecological
information : Harmful to aquatic life with long lasting effects.

SECTION 13: Disposal considerations

The information in this SDS pertains only to the product as shipped.

Use material for its intended purpose or recycle if possible. This material, if it must be discarded, may meet the criteria of a hazardous waste as defined by US EPA under RCRA (40 CFR 261) or other State and local regulations. Measurement of certain physical properties and analysis for regulated components may be necessary to make a correct determination. If this material is classified as a hazardous waste, federal law requires disposal at a licensed hazardous waste disposal facility.

Product : The product should not be allowed to enter drains, water courses or the soil. Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company.

Contaminated packaging : Empty remaining contents. Dispose of as unused product. Do not re-use empty containers.

SECTION 14: Transport information

The shipping descriptions shown here are for bulk shipments only, and may not apply to shipments in non-bulk packages (see regulatory definition).

Consult the appropriate domestic or international mode-specific and quantity-specific Dangerous Goods Regulations for additional shipping description requirements (e.g., technical name or names, etc.) Therefore, the information shown here, may not always agree with the bill of lading shipping description for the material. Flashpoints for the material may vary slightly between the SDS and the bill of lading.

US DOT (UNITED STATES DEPARTMENT OF TRANSPORTATION)

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

IMO / IMDG (INTERNATIONAL MARITIME DANGEROUS GOODS)

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

IATA (INTERNATIONAL AIR TRANSPORT ASSOCIATION)

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

ADR (AGREEMENT ON DANGEROUS GOODS BY ROAD (EUROPE))

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

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RID (REGULATIONS CONCERNING THE INTERNATIONAL TRANSPORT OF DANGEROUS GOODS (EUROPE))

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

ADN (EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY INLAND WATERWAYS)

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

SECTION 15: Regulatory information**Notification status**

Europe REACH	:	This mixture contains only ingredients which have been subject to a pre-registration according to Regulation (EU) No. 1907/2006 (REACH).
Switzerland CH INV	:	On the inventory, or in compliance with the inventory
United States of America (USA) TSCA	:	On TSCA Inventory
Canada DSL	:	All components of this product are on the Canadian DSL
Australia AICS	:	On the inventory, or in compliance with the inventory
New Zealand NZIoC	:	On the inventory, or in compliance with the inventory
Japan ENCS	:	Not in compliance with the inventory
Korea KECI	:	On the inventory, or in compliance with the inventory
Philippines PICCS	:	Not in compliance with the inventory
China IECSC	:	On the inventory, or in compliance with the inventory

Other regulations

: Law on Prevention and Control of Environment Pollution by Solid Waste, Regulation on the Safety Management of Hazardous Chemicals, Provisions on the Safe Use of Chemicals at Workplace, Rules for Classification and Labelling of Chemicals (GB 30000), Law on the Prevention and Control of Occupational Diseases

SECTION 16: Other information**Further information**

Legacy SDS Number : 315030

Significant changes since the last version are highlighted in the margin. This version replaces all previous versions.

The information in this SDS pertains only to the product as shipped.

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The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Key or legend to abbreviations and acronyms used in the safety data sheet

ACGIH	American Conference of Government Industrial Hygienists	LD50	Lethal Dose 50%
AICS	Australia, Inventory of Chemical Substances	LOAEL	Lowest Observed Adverse Effect Level
DSL	Canada, Domestic Substances List	NFPA	National Fire Protection Agency
NDSL	Canada, Non-Domestic Substances List	NIOSH	National Institute for Occupational Safety & Health
CNS	Central Nervous System	NTP	National Toxicology Program
CAS	Chemical Abstract Service	NZIoC	New Zealand Inventory of Chemicals
EC50	Effective Concentration	NOAEL	No Observable Adverse Effect Level
EC50	Effective Concentration 50%	NOEC	No Observed Effect Concentration
EGEST	EOSCA Generic Exposure Scenario Tool	OSHA	Occupational Safety & Health Administration
EOSCA	European Oilfield Specialty Chemicals Association	PEL	Permissible Exposure Limit
EINECS	European Inventory of Existing Chemical Substances	PICCS	Philippines Inventory of Commercial Chemical Substances
MAK	Germany Maximum Concentration Values	PRNT	Presumed Not Toxic
GHS	Globally Harmonized System	RCRA	Resource Conservation Recovery Act
>=	Greater Than or Equal To	STEL	Short-term Exposure Limit
IC50	Inhibition Concentration 50%	SARA	Superfund Amendments and Reauthorization Act.
IARC	International Agency for Research on Cancer	TLV	Threshold Limit Value
IECSC	Inventory of Existing Chemical Substances in China	TWA	Time Weighted Average
ENCS	Japan, Inventory of Existing and New Chemical Substances	TSCA	Toxic Substance Control Act
KECI	Korea, Existing Chemical Inventory	UVCB	Unknown or Variable Composition, Complex Reaction Products, and Biological Materials
<=	Less Than or Equal To	WHMIS	Workplace Hazardous Materials Information System
LC50	Lethal Concentration 50%		