

MATERIAL SAFETY DATA SHEET



MILSTARCH

Drilling Fluids

1. Product and Company Identification

Material name MILSTARCH
Applications FLUID LOSS REDUCER FOR WATER-BASED MUDS
Supplier Baker Hughes Drilling Fluids
2001 Rankin Rd.
Houston, TX 77073
Emergency telephone number 713-439-8900

2. Composition / Information on Ingredients

Components	CAS #	Percent
STARCH	9005-25-8	100

3. Hazards Identification

Potential health effects

Eyes Dust or powder may irritate eye tissue.
Skin Prolonged and/or repeated skin contact with this product may cause irritation/dermatitis.
Inhalation Dusts of this product may cause irritation of the nose, throat, and respiratory tract.
Ingestion No hazard in normal industrial use.

4. First Aid Measures

First aid procedures

Eye contact Rinse immediately with plenty of water for at least 15 minutes. Get medical attention if irritation develops or persists.
Skin contact Remove contaminated clothing. Wash off with soap and water. Get medical attention if irritation develops or persists.
Inhalation Remove to fresh air. Call a physician if symptoms develop or persist.
Ingestion If swallowed, rinse mouth with water (only if the person is conscious). Do not induce vomiting. If ingestion of a large amount does occur, seek medical attention.

General advice If you feel unwell, seek medical advice (show the label where possible).

5. Fire Fighting Measures

Flammable properties Dusts may form an explosive mixture with air.
Hazardous combustion products Carbon monoxide, carbon dioxide, various hydrocarbon fragments as well as thick smoke.
Extinguishing media
Suitable extinguishing media Dry chemical, foam, carbon dioxide.
Unsuitable extinguishing media Water may create a slip hazard with product.
Protection of firefighters
Protective equipment for firefighters Firefighters should wear full protective clothing including self contained breathing apparatus.

6. Accidental Release Measures

Personal precautions Wear appropriate protective equipment and clothing during clean-up.
Evacuation procedures Keep unnecessary personnel away.
Environmental precautions Prevent further leakage or spillage if safe to do so.
Methods for containment Stop the flow of material, if this is without risk.
Methods for cleaning up Product becomes slippery and difficult to handle when wet; spills are best handled while still dry. Sweep up and collect dry product. Vacuum or sweep up material and place in a disposal container. Avoid dust formation.

7. Handling and Storage

Handling	Do not get this material in your eyes, on your skin, or on your clothing. Avoid dust formation. Keep this product from heat, sparks, or open flame. Wash hands after handling and before eating.
Storage	Keep containers tightly closed in a dry, cool and well-ventilated place.

8. Exposure Controls / Personal Protection

Occupational exposure standards

Personal exposure limit	STARCH: LT OES=10 mg/m3
Engineering controls	Provide adequate local exhaust ventilation to maintain worker exposure below exposure limits.
Personal protective equipment	
Eye / face protection	Wear dust goggles.
Skin protection	Use of protective coveralls and long sleeves is recommended. Use of impervious boots is recommended.
Hand protection	Rubber or plastic gloves.
Respiratory protection	Dust safety masks are recommended when the dust concentration is more than 10 mg/m3.
General hygiene considerations	Wash hands before breaks and immediately after handling the product.

9. Physical and Chemical Properties

Appearance / Color / Form	Powder. Off-white. Solid.
Odor	Slight.
Clarity	Not available
Odor threshold	Not available
Physical state	Solid
pH	6 - 8 (10% soln.)
Melting point	Not available
Freezing point	Not available
Boiling point	Not available
Flash point	Not available
Evaporation rate	Not available
Flammability limits in air, lower, % by volume	Not available
Flammability limits in air, upper, % by volume	Not available
Vapor pressure	Not available
Vapor density	Not available
Specific gravity	Not available
Relative density	500 - 700 kg/m3 @ 20 Deg C
Solubility	Soluble in water.
Octanol/H2O coeff	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available
Percent volatile	< 1 %

10. Chemical Stability and Reativity Information

Chemical stability	Stable at normal conditions.
Conditions to avoid	Exposure to moisture.
Possibility of hazardous reactions	Will not occur.

11. Toxicological Information

Not available

12. Ecological Information

Ecotoxicity	This material is not expected to be harmful to aquatic life.
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13. Disposal Considerations

Disposal instructions This product, in its present state, when discarded or disposed of, is not a hazardous waste according to Federal regulations (40 CFR 261.4 (b)(4)). Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste.

14. Transport Information

Department of Transportation (DOT) Requirements

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

15. Regulatory Information

US federal regulations This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are on the U.S. EPA TSCA Inventory List.

CERCLA/SARA Hazardous Substances - Not applicable.

Occupational Safety and Health Administration (OSHA)

29 CFR 1910.1200 hazardous chemical Yes

CERCLA (Superfund) reportable quantity None

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - No
Delayed Hazard - Yes
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

Section 302 extremely hazardous substance No

Section 311 hazardous chemical Yes

Food and Drug Administration (FDA) Total food additive
GRAS food additive

Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (CCS)	Yes
Europe	European Inventory of New and Existing Chemicals (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Japanese Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Korean Inventory of Chemicals (KICS)	Yes
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

International regulations The product does not need to be labelled in accordance with EC directives or respective national laws.

State regulations This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

16. Other Information

HMIS ratings Health: 1*
Flammability: 1
Physical hazard: 0
Personal protection: C

NFPA ratings

Health: 0
Flammability: 1
Instability: 0

Disclaimer

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.

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