



Prairie Mud Service

Fluid Solutions Thru Experience and Technology

BARITE

Safety Data Sheet

Revision Date: January 18, 2017
Review Date: May 7, 2024

1. Identification

1.1 Product identifier

Product name FED WATE[®]
Product code PID14411

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
Prairie Mud Service
738 6th Street
Esteran, SK S4A 1A4
(306) 634-3411

Prepared by
Global Regulatory Compliance - Chemicals (GRC - Chemicals) , Bethicia Prasek

1.4 Emergency Telephone Number

Emergency telephone CANUTEC - (613) 996-6666 or *666 on cellular phone

2. Hazards identification

2.1 Classification of the substance or mixture

GHS - Classification

Health hazards

| | |
|-----------------|-------------|
| Carcinogenicity | Category 1A |
|-----------------|-------------|



Prairie Mud Service

Fluid Solutions Thru Experience and Technology

| | |
|--|------------|
| Specific target organ toxicity (repeated exposure) | Category 2 |
|--|------------|

Environmental hazards Not classified

Physical Hazards Not classified

2.2 Label elements



Signal word

DANGER

Hazard statements

H350i - May cause cancer by inhalation

H373 - May cause damage to organs through prolonged or repeated exposure if inhaled

Precautionary statements

P201 - Obtain special instructions before use

P202 - Do not handle until all safety precautions have been read and understood

P260 - Do not breathe dust

P264 - Wash face, hands and any exposed skin thoroughly after handling

P270 - Do not eat, drink or smoke when using this product

P280 - Wear protective gloves/protective clothing and eye/face protection

P308 + P313 - IF exposed or concerned: Get medical advice/ attention

P501 - Dispose of contents/ container to an approved waste disposal plant

Hazards not otherwise classified

None known

Unknown acute toxicity Not applicable.

3. Composition/information on Ingredients

3.1 Substances

3.2 Mixtures

Not applicable

| Chemical Name | CAS No | Weight-% |
|-----------------------------|------------|----------|
| Barite | 7727-43-7 | 60 - 100 |
| Silica, crystalline, quartz | 14808-60-7 | 1 - 5 |
| Mica | 12001-26-2 | 1 - 5 |

Comments

Crystalline silica is the most widely occurring of all minerals. The most common form of silica is sand. The International Agency for



Research on Cancer (IARC) has designated crystalline silica in the form of quartz or cristobalite a Group 1 (carcinogenic to humans). This designation was based on an increased risk of lung cancer among crystalline silica exposed workers. IARC did note that carcinogenicity of crystalline silica in humans was not detected in all industrial circumstances studied. Further, carcinogenicity of crystalline silica may be dependent on inherent characteristics of the crystalline silica or external factors affecting its biological activity or distribution of polymorphs. (IARC Vol. 68, 1997, p. 41). The National Toxicology Program (NTP) classifies crystalline silica as "reasonably anticipated to cause cancer in humans" (6th Annual Report on Carcinogens, 1991). Long term inhalation of crystalline silica can also result in the lung disease, silicosis. Symptoms of this disease include coughing and shortness of breath. (NJ HSFS, January 1996)

Percentages (concentrations) represented as a range are due to batch-to-batch variability.

4. First aid measures

4.1 First-Aid Measures

| | |
|---------------------|--|
| Inhalation | Move to fresh air. If breathing is difficult, (trained personnel should) give oxygen. Get medical attention immediately if symptoms occur. |
| Ingestion | Drink 1 or 2 glasses of water. Never give anything by mouth to an unconscious person. Get medical attention if symptoms occur. |
| Skin contact | Wash skin thoroughly with soap and water. Remove contaminated clothing and launder before reuse. Get medical attention if irritation persists. |
| Eye contact | Promptly wash eyes with lots of water while lifting eye lids. Remove contact lenses. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues. |

4.2 Most important symptoms and effects, both acute and delayed

Main 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

Use extinguishing media appropriate for surrounding material.

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

Silicon oxide, Sulphur oxides.

5.3 Advice for firefighters

Special protective equipment for fire-fighters

As in any fire, wear self-contained breathing apparatus and full protective gear.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Wear suitable protective equipment. Evacuate personnel to safe areas. Prevent further leakage or spillage if safe to do so. Avoid dust formation.

6.2 Environmental precautions

Do not allow material to contaminate ground water system.

Environmental exposure controls

No information available.

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. Avoid generating or breathing dust. Product is slippery if wet.

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, eyes and clothing. Avoid dust formation. Do not breathe dust. For personal protection see section 8.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures/precautions Ensure adequate ventilation. Keep airborne concentrations below exposure limits.

Storage precautions Protect from moisture Keep containers tightly closed in a dry, cool and well-ventilated place. Follow safe warehousing practices regarding palletizing, banding, shrink-wrapping and/or stacking.

8. Exposure controls/personal protection

8.1 Control parameters

Component Information



| Chemical Name | ACGIH TLV | OSHA PEL |
|-----------------------------|----------------------------|--|
| Barite | 10 mg/m ³ | 15 mg/m ³ (total); 5 mg/m ³ (resp) |
| Silica, crystalline, quartz | 0.025 mg/m ³ | see Table Z-3 |
| Mica | 3 mg/m ³ (resp) | 20 mppcf (<1% crystalline silica). See Table Z-3. |

Silica, crystalline, quartz

OSHA - Final PELs - Table Z-3 Mineral Dusts

(30)/(%SiO₂ + 2) mg/m³ TWA, total dust; (250)/(%SiO₂ + 5) mppcf TWA, respirable fraction; (10)/(%SiO₂ + 2) mg/m³ TWA, respirable fraction

Mica

OSHA - Final PELs - Table Z-3 Mineral Dusts

20 mppcf TWA (<1% Crystalline silica)

8.2 Exposure controls

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 measures to reduce exposure

Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

Eye protection

Tightly fitting safety goggles.

Hand protection

Wear chemical resistant gloves such as nitrile or neoprene.

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. Use NIOSH approved respirator with dust and mist protection (3M 8210). If dust concentration exceeds 5 times the exposure limit, wear an approved HEPA respirator.

Skin and body protection

Wear suitable protective clothing and gloves, Eye wash and emergency shower must be available at the work place.

Hygiene measures

Wash hands before breaks and immediately after handling the product, 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 | Opaque |
| Color | Tan - Gray |
| Odor | Odorless |
| Odor threshold | Not applicable |

| <u>Property</u> | <u>Values</u> | <u>Remarks</u> |
|-----------------------------------|--------------------------|--------------------------|
| pH | Not applicable | |
| pH @ dilution | | No information available |
| Melting / freezing point | No information available | |
| Boiling point/range | No information available | |
| Flash point | Not applicable | |
| Evaporation rate (BuAc =1) | No information available | |
| Flammability (solid, gas) | Not applicable | |
| Flammability Limit in Air | | |
| Upper flammability limit | No information available | |



Prairie Mud Service

Fluid Solutions Thru Experience and Technology

| | |
|-------------------------------------|--------------------------|
| 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 | Insoluble |
| 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 | 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 |

10. Stability and reactivity

10.1 Reactivity

No specific reactivity hazards associated with this product.

10.2 Chemical stability

Stable. Hazardous polymerization does not occur.

10.3 Possibility of Hazardous Reactions

Hazardous polymerization

Hazardous polymerization does not occur.

Hazardous Reactions

None known.

10.4 Conditions to avoid

None known.

10.5 Incompatible materials

Hydrofluoric acid (HF).

10.6 Hazardous decomposition products

See Section 5.

11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Inhalation

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



danger of serious damage to health by prolonged exposure through inhalation. Repeated or prolonged inhalation of crystalline silica dust can cause delayed lung injury, and other diseases, including silicosis and lung cancer.

- Eye contact** Dust may cause mechanical irritation.
- Skin contact** Repeated exposure may cause skin dryness or cracking.
- Ingestion** Irritant; may cause pain or discomfort to mouth, throat and stomach.

| Chemical Name | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|-----------------------------|---------------------|-------------------|-------------------|
| Barite | No data available | No data available | No data available |
| Silica, crystalline, quartz | = 500 mg/kg (Rat) | No data available | No data available |
| Mica | No data available | No data available | No data available |

| Chemical Name | IARC Group 1 or 2 | ACGIH - Carcinogens | OSHA listed carcinogens | NTP |
|-----------------------------|---|-------------------------------|-------------------------|------------------------|
| Barite | No data available | No data available | No data available | No data available |
| Silica, crystalline, quartz | Group 1; Monograph 100C [2012] Monograph 100C [2012] (listed under Crystalline silica inhaled in the form of quartz or cristobalite from occupational sources); Monograph 68 [1997] | A2 Suspected Human Carcinogen | Present | Known Human Carcinogen |
| Mica | No data available | No data available | No data available | No data available |

- Sensitization** Not classified.
- Mutagenic effects** No evidence of mutagenic properties.
- Carcinogenicity** Contains a known or suspected carcinogen. Crystalline silica dust is listed by IARC in Group 1 as known to cause lung cancer in humans, if inhaled.
- Reproductive toxicity** No evidence of toxicity to reproduction.
- Developmental toxicity** Not known to cause birth defects or have a deleterious effect on a developing fetus.
- Routes of exposure** Skin contact. Inhalation. Eye contact.
- Routes of entry** Inhalation.
- Specific target organ toxicity (single exposure)** Not classified
- Specific target organ toxicity (repeated exposure)** Category 2.
- Target organ effects** Respiratory system. Lungs.
- Aspiration hazard** Not applicable.



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 |
|-----------------------------|--------------------------|--------------------------|---|
| Barite | No information available | No information available | No information available |
| Silica, crystalline, quartz | No information available | No information available | No information available |
| Mica | No information available | No information available | No information available |

12.2 Persistence and degradability

No product level data available.

12.3 Bioaccumulative potential

No product level data available.

12.4 Mobility in soil

No information available.

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



Prairie Mud Service

Fluid Solutions Thru Experience and Technology

UN No. (TDG) Not regulated
 UN/ID No. (ADR/RID/ADN/ADG) Not regulated
 UN No. (IMDG) Not regulated
 UN No. (ICAO) 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
 TDG Hazard class Not regulated
 ADR/RID/ADN/ADG Hazard class Not regulated
 IMDG Hazard class Not regulated
 ICAO Hazard class/division Not regulated

14.4 Packing group

DOT Packing group Not regulated
 TDG Packing group Not regulated
 ADR/RID/ADN/ADG Packing group Not regulated
 IMDG Packing group Not regulated
 ICAO Packing group Not regulated

14.5 Environmental hazard

Marine pollutant No

14.6 Special precautions

Not applicable

15. Regulatory information

International inventories

USA (TSCA) Complies
 Canada (DSL) Complies
 European Union (EINECS and ELINCS) Complies
 Philippines (PICCS) Complies
 Japan (ENCS) Complies
 China (IECSC) Complies
 Australia (AICS) Complies
 Korean (KECL) Complies
 New Zealand (NZIoC) Complies

U.S. Federal and State Regulations

SARA 311/312 Hazard Categories

Delayed (chronic) health hazard.

| Chemical Name | SARA 302 / TPQs | SARA 313 | CERCLA RQ |
|---------------|-----------------|----------|-----------|
| Barite | N/A | N/A | N/A |



Prairie Mud Service

Fluid Solutions Thru Experience and Technology

| | | | |
|-----------------------------|-----|-----|-----|
| Silica, crystalline, quartz | N/A | N/A | N/A |
| Mica | N/A | N/A | N/A |

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.

Canadian Classification

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

16. Other information

Revision date 18/Jan/2017

Version 7

This SDS has been revised in the following section(s) 1, 2, 3, 5, 15, 16. Updated according to WHMIS 2015.

HMIS classification

| | |
|-----------------|----|
| Health | 1* |
| Flammability | 0 |
| Physical hazard | 0 |
| PPE | E |

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

This product's health and safety information is provided to assist our customers in assessing compliance with Health, Safety and Environmental regulations. The information contained herein is based on data available to us, and is believed to be accurate, although no guarantee or warranty is provided or implied by the company in this respect. Since the use of this product is within the exclusive control of the user, it is the user's responsibility to determine the conditions which include but are not limited to the safe use, storage, disposal, and transportation. Such conditions must comply with all governmental regulations.