

SAFETY DATA SHEET

Product Trade Name: INVERMUL® RF SYSTEM with BAROID®

Revision Date: 22-Jan-2019

Revision Number: 11

1. Identification

1.1. Product Identifier

Product Trade Name: INVERMUL® RF SYSTEM with BAROID®
Synonyms: None
Chemical Family: Blend
Internal ID Code: HM003810

1.2 Recommended use and restrictions on use

Application: Mud System
Uses advised against: No information available

1.3 Manufacturer's Name and Contact Details

Manufacturer/Supplier

Baroid Fluid Services
 Product Service Line of Halliburton Energy Services, Inc.
 P.O. Box 1675
 Houston, TX 77251
 Telephone: (281) 871-4000

Halliburton Group Canada
 645 - 7th Ave SW Suite 1800
 Calgary, AB
 T2P 4G8
 Canada
 Telephone: 1-403-231-9300

Prepared By

Chemical Stewardship
 Telephone: 1-281-871-6107
 e-mail: fdunexchem@halliburton.com

1.4. Emergency telephone number:

Emergency Telephone Number: 1-866-519-4752 or 1-760-476-3962
 Global Incident Response Access Code: 334305
 Contract Number: 14012

2. Hazards Identification

2.1 Classification in accordance with paragraph (d) of §1910.1200

Skin Corrosion / Irritation	Category 2 - H315
Serious Eye Damage/Irritation	Category 2B - H320
Skin Sensitization	Category 1 - H317
Carcinogenicity	Category 1A - H350
Specific Target Organ Toxicity - (Repeated Exposure)	Category 2 - H373
Acute Aquatic Toxicity	Category 3 - H402
Chronic Aquatic Toxicity	Category 2 - H411
Flammable liquids.	Category 4 - H227

2.2. Label Elements

Hazard Pictograms



Signal Word:

Danger

Hazard Statements

- H227 - Combustible liquid
- H315 - Causes skin irritation
- H317 - May cause an allergic skin reaction
- H320 - Causes mild eye irritation
- H350 - May cause cancer
- H373 - May cause damage to organs through prolonged or repeated exposure
- H402 - Harmful to aquatic life
- 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
- P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P260 - Do not breathe dust/fume/gas/mist/vapors/spray
- P264 - Wash face, hands and any exposed skin thoroughly after handling
- P272 - Contaminated work clothing should not be allowed out of the workplace
- P273 - Avoid release to the environment

Response

- P280 - Wear protective gloves/protective clothing/eye protection/face protection
- P302 + P352 - IF ON SKIN: Wash with plenty of water.
- P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention
- P362 + P364 - Take off contaminated clothing and wash before reuse
- P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
- P337 + P313 - If eye irritation persists: Get medical advice/attention
- P363 - Wash contaminated clothing before reuse
- P308 + P313 - IF exposed or concerned: Get medical advice/attention
- P370 + P378 - In case of fire: Use CO2, dry chemical, or foam

Storage

- P391 - Collect spillage
- P403 + P235 - Store in a well-ventilated place. Keep cool

Disposal

- P405 - Store locked up
- P501 - Dispose of contents/container in accordance with local/regional/national/international regulations

2.3 Hazards not otherwise classified

None known

3. Composition/information on Ingredients

Substances	CAS Number	PERCENT (w/w)	GHS Classification - US
Barium sulfate	7727-43-7	30 - 60%	Not classified
Diesel	68476-34-6	30 - 60%	Acute Tox. 4 (H332) Skin Irrit. 2 (H315)

			Carc. 2 (H351) STOT RE 2 (H373) Asp. Tox. 1 (H304) Aquatic Acute 3 (H402) Aquatic Chronic 2 (H411) Flam. Liq. 4 (H227)
Calcium chloride	10043-52-4	5 - 10%	Eye Irrit. 2A (H319)
Crystalline silica, quartz	14808-60-7	0.1 - 1%	Carc. 1A (H350) STOT RE 1 (H372)
Carboxylic acid terminated fatty polyamide	Proprietary	0.1 - 1%	Skin Sens. 1 (H317)

The exact percentage (concentration) of the composition has been withheld as proprietary.

4. First Aid Measures

4.1. Description of first aid measures

Inhalation If inhaled, move victim to fresh air and seek medical attention.
Eyes In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.
Skin Wash with soap and water. Get medical attention if irritation persists. Remove contaminated clothing and launder before reuse.
Ingestion Get medical attention! If vomiting occurs, keep head lower than hips to prevent aspiration. Rinse mouth. Never give anything by mouth to an unconscious person.

4.2 Most important symptoms/effects, acute and delayed

Causes mild eye irritation. Causes skin irritation. May cause allergic skin reaction. Breathing crystalline silica can cause lung disease, including silicosis and lung cancer. Crystalline silica has also been associated with scleroderma and kidney disease. May cause damage to organs through prolonged or repeated exposure. Carcinogen.

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, carbon dioxide, foam, dry chemical.

Extinguishing media which must not be used for safety reasons

None known.

5.2 Specific hazards arising from the substance or mixture

Special exposure hazards in a fire

Use water spray to cool fire exposed surfaces. Closed containers may explode in fire. Decomposition in fire may produce harmful gases.

5.3 Special protective equipment and precautions for fire-fighters

Special protective equipment for firefighters

Full protective clothing and approved self-contained breathing apparatus required for fire fighting personnel.

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Use appropriate protective equipment. Wear self-contained breathing apparatus in enclosed areas. See Section 8 for additional information

6.2. Environmental precautions

Prevent from entering sewers, waterways, or low areas.

6.3. Methods and material for containment and cleaning up

Isolate spill and stop leak where safe. Contain spill with sand or other inert materials. Scoop up and remove.

7. Handling and storage

7.1. Precautions for safe handling

Handling Precautions

This product contains quartz, cristobalite, and/or tridymite which may become airborne without a visible cloud if this product becomes dry. Avoid breathing or creating dust. Use only with adequate ventilation to keep exposures below recommended exposure limits. Wear a NIOSH certified, European Standard EN 149, or equivalent respirator when using dried product.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Storage Information

Store away from oxidizers. Keep from heat, sparks, and open flames. Use good housekeeping in storage and work areas to prevent accumulation of dust. Close container when not in use.

8. Exposure Controls/Personal Protection

8.1 Occupational Exposure Limits

Substances	CAS Number	OSHA PEL-TWA	ACGIH TLV-TWA
Barium sulfate	7727-43-7	TWA: 15 mg/m ³ TWA: 5 mg/m ³	TWA: 5 mg/m ³
Diesel	68476-34-6	Not applicable	TWA: 100 mg/m ³
Calcium chloride	10043-52-4	Not applicable	Not applicable
Crystalline silica, quartz	14808-60-7	TWA: 50 µg/m ³	TWA: 0.025 mg/m ³
Carboxylic acid terminated fatty polyamide	Proprietary	Not applicable	Not applicable

8.2 Appropriate engineering controls

Engineering Controls

Use in a well ventilated area. Local exhaust ventilation should be used in areas without good cross ventilation. Use approved industrial ventilation and local exhaust as required to maintain exposures below applicable exposure limits.

8.3 Individual protection measures, such as personal protective equipment

Personal Protective Equipment

If engineering controls and work practices cannot prevent excessive exposures, the selection and proper use of personal protective equipment should be determined by an industrial hygienist or other qualified professional based on the specific application of this product.

Respiratory Protection

If engineering controls and work practices cannot keep exposure below occupational exposure limits or if exposure is unknown, wear a NIOSH certified, European Standard EN 149, AS/NZS 1715:2009, or equivalent respirator when using this product. Selection of and instruction on using all personal protective equipment, including respirators, should be performed by an Industrial Hygienist or other qualified professional.
Organic vapor respirator.

Hand Protection

Chemical-resistant protective gloves (EN 374) Suitable materials for longer, direct contact (recommended: protection index 6, corresponding to > 480 minutes permeation time as per EN 374): Nitrile gloves. (>= 0.4 mm thickness)

10.4. Conditions to avoid

Keep away from heat, sparks and flame.

10.5. Incompatible materials

Strong oxidizers.

10.6. Hazardous decomposition products

Oxides of nitrogen. Carbon monoxide and carbon dioxide. Amorphous silica may transform at elevated temperatures to tridymite (870 C) or cristobalite (1470 C).

11. Toxicological Information

11.1 Information on likely routes of exposure

Principle Route of Exposure Eye or skin contact, inhalation.

11.2 Symptoms related to the physical, chemical and toxicological characteristics

Acute Toxicity

Inhalation

If this product becomes dry, it may produce respirable crystalline silica dust. Inhaled crystalline silica in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (IARC, Group 1). There is sufficient evidence in experimental animals for the carcinogenicity of tridymite (IARC, Group 2A).

Breathing silica dust may cause irritation of the nose, throat, and respiratory passages. Breathing silica dust may not cause noticeable injury or illness even though permanent lung damage may be occurring. Inhalation of dust may also have serious chronic health effects (See "Chronic Effects/Carcinogenicity" subsection below).

**Eye Contact
Skin Contact**

Causes mild eye irritation.
Causes skin irritation. May cause an allergic skin reaction. May cause skin defatting with prolonged exposure.

Ingestion

May produce nervous system effects such as feeling of weakness, unsteady walk, and dilation of blood vessels. May affect the heart and cardiovascular system. Aspiration into the lungs may cause chemical pneumonitis including coughing, difficulty breathing, wheezing, coughing up blood and pneumonia, which can be fatal.

Chronic Effects/Carcinogenicity

Contains petroleum distillates which have been shown to cause skin cancer in laboratory animals. Silicosis: Excessive inhalation of respirable crystalline silica dust may cause a progressive, disabling, and sometimes-fatal lung disease called silicosis. Symptoms include cough, shortness of breath, wheezing, non-specific chest illness, and reduced pulmonary function. This disease is exacerbated by smoking. Individuals with silicosis are predisposed to develop tuberculosis.

Cancer Status: The International Agency for Research on Cancer (IARC) has determined that crystalline silica inhaled in the form of quartz or cristobalite from occupational sources can cause lung cancer in humans (Group 1 - carcinogenic to humans) and has determined that there is sufficient evidence in experimental animals for the carcinogenicity of tridymite (Group 2A - possible carcinogen to humans). Refer to IARC Monograph 68, Silica, Some Silicates and Organic Fibres (June 1997) in conjunction with the use of these minerals. The National Toxicology Program classifies respirable crystalline silica as "Known to be a human carcinogen". Refer to the 9th Report on Carcinogens (2000). The American Conference of Governmental Industrial Hygienists (ACGIH) classifies crystalline silica, quartz, as a suspected human carcinogen (A2). There is some evidence that breathing respirable crystalline silica or the disease silicosis is associated with

an increased incidence of significant disease endpoints such as scleroderma (an immune system disorder manifested by scarring of the lungs, skin, and other internal organs) and kidney disease.

11.3 Toxicity data

Toxicology data for the components

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
Barium sulfate	7727-43-7	> 5000 mg/kg (Rat) > 3000mg/kg (Mouse)	No data available	>1.1 mg/L (rat, aerosol, 4hr) (similar substance)
Diesel	68476-34-6	7,600 mg/kg bw (Rat)	> 4300 mg/kg bw (Rabbit)	4.1 mg/L (Rat, mist, 4h)
Calcium chloride	10043-52-4	> 1000 mg/kg (Rat) 2301 mg/kg (Rat) > 2000 mg/kg (Rat) 2240 mg/kg (Rat)	5000 mg/kg (Rabbit)	No data available
Crystalline silica, quartz	14808-60-7	> 15000 mg/kg (human)	No data available	No data available
Carboxylic acid terminated fatty polyamide	Proprietary	>2020 mg/kg-bw (rat)	>2000 mg/kg-bw (rat)	No data available

Substances	CAS Number	Skin corrosion/irritation
Barium sulfate	7727-43-7	Non-irritating to the skin (in vitro) (similar substances)
Diesel	68476-34-6	Irritating to skin. (Rabbit)
Calcium chloride	10043-52-4	Causes mild skin irritation (Rabbit)
Crystalline silica, quartz	14808-60-7	Non-irritating to the skin
Carboxylic acid terminated fatty polyamide		Non-irritating to the skin

Substances	CAS Number	Serious eye damage/irritation
Barium sulfate	7727-43-7	Non-irritating to the eye (similar substances)
Diesel	68476-34-6	Non-irritating to the eye (Rabbit)
Calcium chloride	10043-52-4	Causes moderate eye irritation (Rabbit)
Crystalline silica, quartz	14808-60-7	Non-irritating to the eye No information available
Carboxylic acid terminated fatty polyamide		Non-irritating to rabbit's eye

Substances	CAS Number	Skin Sensitization
Barium sulfate	7727-43-7	Did not cause sensitization on laboratory animals (mouse) (similar substances)
Diesel	68476-34-6	Did not cause sensitization on laboratory animals (guinea pig)
Calcium chloride	10043-52-4	No information available
Crystalline silica, quartz	14808-60-7	No information available.
Carboxylic acid terminated fatty polyamide		Skin sensitizer in guinea pig.

Substances	CAS Number	Respiratory Sensitization
Barium sulfate	7727-43-7	No information available
Diesel	68476-34-6	No information available
Calcium chloride	10043-52-4	No information available
Crystalline silica, quartz	14808-60-7	No information available
Carboxylic acid terminated fatty polyamide		No information available

Substances	CAS Number	Mutagenic Effects
Barium sulfate	7727-43-7	In vitro tests did not show mutagenic effects. (similar substances)
Diesel	68476-34-6	Not regarded as mutagenic.
Calcium chloride	10043-52-4	Did not show mutagenic effects in animal experiments
Crystalline silica, quartz	14808-60-7	Not regarded as mutagenic.
Carboxylic acid terminated fatty polyamide		In vivo tests did not show mutagenic effects. In vitro tests did not show mutagenic effects.

Substances	CAS Number	Carcinogenic Effects
Barium sulfate	7727-43-7	Did not show carcinogenic effects in animal experiments (similar substances)

Diesel	68476-34-6	Contains petroleum distillates which have been shown to cause skin cancer in laboratory animals.
Calcium chloride	10043-52-4	No information available
Crystalline silica, quartz	14808-60-7	Contains crystalline silica which may cause silicosis, a delayed and progressive lung disease. The IARC and NTP have determined there is sufficient evidence in humans of the carcinogenicity of crystalline silica with repeated respiratory exposure.
Carboxylic acid terminated fatty polyamide		No information available

Substances	CAS Number	Reproductive toxicity
Barium sulfate	7727-43-7	No information available
Diesel	68476-34-6	Animal testing did not show any effects on fertility. (fetotoxic and teratogenic effects).
Calcium chloride	10043-52-4	Animal testing did not show any effects on fertility.
Crystalline silica, quartz	14808-60-7	No information available
Carboxylic acid terminated fatty polyamide		Animal testing did not show any effects on fertility. Did not show teratogenic effects in animal experiments.

Substances	CAS Number	STOT - single exposure
Barium sulfate	7727-43-7	No significant toxicity observed in animal studies at concentration requiring classification. (similar substances)
Diesel	68476-34-6	No significant toxicity observed in animal studies at concentration requiring classification.
Calcium chloride	10043-52-4	No significant toxicity observed in animal studies at concentration requiring classification.
Crystalline silica, quartz	14808-60-7	No significant toxicity observed in animal studies at concentration requiring classification.
Carboxylic acid terminated fatty polyamide		No information available

Substances	CAS Number	STOT - repeated exposure
Barium sulfate	7727-43-7	No significant toxicity observed in animal studies at concentration requiring classification. (similar substances)
Diesel	68476-34-6	Causes damage to organs through prolonged or repeated exposure in contact with skin: (Liver) (Thymus) bone marrow
Calcium chloride	10043-52-4	No information available.
Crystalline silica, quartz	14808-60-7	Causes damage to organs through prolonged or repeated exposure if inhaled: (Lungs)
Carboxylic acid terminated fatty polyamide		No data of sufficient quality are available.

Substances	CAS Number	Aspiration hazard
Barium sulfate	7727-43-7	Not applicable
Diesel	68476-34-6	Aspiration into the lungs may cause chemical pneumonitis including coughing, difficulty breathing, wheezing, coughing up blood and pneumonia, which can be fatal.
Calcium chloride	10043-52-4	Not applicable
Crystalline silica, quartz	14808-60-7	Not applicable
Carboxylic acid terminated fatty polyamide		Not applicable

12. Ecological Information

12.1. Toxicity

Ecotoxicity effects

Toxic to aquatic life with long lasting effects.

Substance Ecotoxicity Data

Substances	CAS Number	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Toxicity to Invertebrates
Barium sulfate	7727-43-7	No information available	LC50 (96h) 3.5 mg/L (Danio rerio) BCF 1.2-74.4 L/kg (Lepomis macrochirus)	No information available	NOEC (7d) 100 mg/L (Cancer anthonyi)
Diesel	68476-34-6	EL50 (72h) 10 mg/L (Pseudokirchnerella subcapitata) NOEL (72h) 3 mg/L (Pseudokirchnerella subcapitata)	LL50 (96h) 21 mg/L (Oncorhynchus mykiss) NOEL (96 h) 10 mg/L (Oncorhynchus mykiss)	No information available	EL50 (48h) 210 mg/L (Daphnia magna) NOEL (48h) 46 mg/L (Daphnia magna)
Calcium chloride	10043-52-4	ErC50 (72h) 2900 mg/L (Pseudokirchnerella)	LC50 (96h) 4630 mg/L (Pimephales promelas)	No information available	EC50 (48h) 2400 mg/L (Daphnia magna)

		subcapitata) ErC50 (72h) 4000 mg/L (Pseudokirchnerella subcapitata)	LC50 (48h) >6560 mg/L (Pimephales promelas) LC50 (24h) >6660 mg/L (Pimephales promelas)		EC50 (21d) 610 mg/L (reproduction) (Daphnia magna)
Crystalline silica, quartz	14808-60-7	EC50(72 h)=440 mg/L (Pseudokirchneriella subcapitata)	LL0(96 h)=10000 mg/L (Danio rerio)	No information available	LL50(24 h)>10000 mg/L (Daphnia magna)
Carboxylic acid terminated fatty polyamide	Proprietary	EL50 (72 h) =23.8 mg/L (Skeletonema costatum) EC50 (72 h) >100 mg/L (Pseudokirchneriella subcapitata)	LL50 (96 h) >1000 mg/L (Scopthalmus maximus)	No information available	LL50 (48 h) >2000 mg/L (Acartia tonsa)

12.2. Persistence and degradability

Substances	CAS Number	Persistence and Degradability
Barium sulfate	7727-43-7	The methods for determining biodegradability are not applicable to inorganic substances.
Diesel	68476-34-6	Persistent (57.5-60% @ 28d)
Calcium chloride	10043-52-4	The methods for determining biodegradability are not applicable to inorganic substances.
Crystalline silica, quartz	14808-60-7	The methods for determining biodegradability are not applicable to inorganic substances.
Carboxylic acid terminated fatty polyamide	Proprietary	Inherently biodegradable (34% @ 56d)

12.3. Bioaccumulative potential

Substances	CAS Number	Bioaccumulation
Barium sulfate	7727-43-7	No information available
Diesel	68476-34-6	No information available
Calcium chloride	10043-52-4	No information available
Crystalline silica, quartz	14808-60-7	No information available
Carboxylic acid terminated fatty polyamide	Proprietary	No information available

12.4. Mobility in soil

Substances	CAS Number	Mobility
Barium sulfate	7727-43-7	No information available
Diesel	68476-34-6	No information available
Calcium chloride	10043-52-4	No information available
Crystalline silica, quartz	14808-60-7	No information available
Carboxylic acid terminated fatty polyamide	Proprietary	No information available

12.5 Other adverse effects

No information available

13. Disposal Considerations

13.1. Waste treatment methods

Disposal methods Disposal should be made in accordance with federal, state, and local regulations.
Contaminated Packaging Follow all applicable national or local regulations.

14. Transport Information

US DOT

UN Number UN3082
UN proper shipping name: Environmentally Hazardous Substance, Liquid, N.O.S. (Contains Diesel Fuel)
Transport Hazard Class(es): 9
Packing Group: III
Environmental Hazards: Marine Pollutant
NAERG: NAERG 171

Canadian TDG

UN Number UN3082
UN proper shipping name: Environmentally Hazardous Substance, Liquid, N.O.S. (Contains Diesel Fuel)
Transport Hazard Class(es): 9
Packing Group: III
Environmental Hazards: Marine Pollutant

IMDG/IMO

UN Number UN3082
UN proper shipping name: Environmentally Hazardous Substance, Liquid, N.O.S. (Contains Diesel Fuel)
Transport Hazard Class(es): 9
Packing Group: III
Environmental Hazards: Marine Pollutant

IATA/ICAO

UN Number UN3082
UN proper shipping name: Environmentally Hazardous Substance, Liquid, N.O.S.
Transport Hazard Class(es): 9
Packing Group: III
Environmental Hazards: Marine Pollutant

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable
Special Precautions for User None

15. Regulatory Information

US Regulations

US TSCA Inventory All components listed on inventory or are exempt.

TSCA Significant New Use Rules - S5A2

Substances	CAS Number	TSCA Significant New Use Rules - S5A2
Barium sulfate	7727-43-7	Not applicable
Diesel	68476-34-6	Not applicable
Calcium chloride	10043-52-4	Not applicable
Crystalline silica, quartz	14808-60-7	Not applicable
Carboxylic acid terminated fatty polyamide	Proprietary	Not applicable

EPA SARA Title III Extremely Hazardous Substances

Substances	CAS Number	EPA SARA Title III Extremely Hazardous Substances
Barium sulfate	7727-43-7	Not applicable
Diesel	68476-34-6	Not applicable
Calcium chloride	10043-52-4	Not applicable
Crystalline silica, quartz	14808-60-7	Not applicable
Carboxylic acid terminated fatty polyamide	Proprietary	Not applicable

EPA SARA (311,312) Hazard Class

Serious eye damage or eye irritation
 Skin Corrosion or Irritation
 Respiratory or Skin Sensitization
 Carcinogenicity
 Specific target organ toxicity (single or repeated exposure)
 Flammable (gases, aerosols, liquids, or solids)

EPA SARA (313) Chemicals

Substances	CAS Number	Toxic Release Inventory (TRI) - Group I	Toxic Release Inventory (TRI) - Group II

Barium sulfate	7727-43-7	1.0%	Not applicable
Diesel	68476-34-6	Not applicable	Not applicable
Calcium chloride	10043-52-4	Not applicable	Not applicable
Crystalline silica, quartz	14808-60-7	Not applicable	Not applicable
Carboxylic acid terminated fatty polyamide	Proprietary	Not applicable	Not applicable

EPA CERCLA/Superfund Reportable Spill Quantity

Substances	CAS Number	CERCLA RQ
Barium sulfate	7727-43-7	Not applicable
Diesel	68476-34-6	Not applicable
Calcium chloride	10043-52-4	Not applicable
Crystalline silica, quartz	14808-60-7	Not applicable
Carboxylic acid terminated fatty polyamide	Proprietary	Not applicable

EPA RCRA Hazardous Waste Classification

If product becomes a waste, it does NOT meet the criteria of a hazardous waste as defined by the US EPA.

California Proposition 65

Substances	CAS Number	California Proposition 65
Barium sulfate	7727-43-7	Not applicable
Diesel	68476-34-6	Not applicable
Calcium chloride	10043-52-4	Not applicable
Crystalline silica, quartz	14808-60-7	carcinogen
Carboxylic acid terminated fatty polyamide	Proprietary	Not applicable

U.S. State Right-to-Know Regulations

Substances	CAS Number	MA Right-to-Know Law	NJ Right-to-Know Law	PA Right-to-Know Law
Barium sulfate	7727-43-7	Present	Present	Present Environmental hazard
Diesel	68476-34-6	Not applicable	Not applicable	Not applicable
Calcium chloride	10043-52-4	Not applicable	Not applicable	Not applicable
Crystalline silica, quartz	14808-60-7	Carcinogen Extraordinarily hazardous	Present	Present
Carboxylic acid terminated fatty polyamide	Proprietary	Not applicable	Not applicable	Not applicable

NFPA Ratings: Health 1, Flammability 2, Reactivity 0
HMIS Ratings: Health 1*, Flammability 2, Reactivity 0

Canadian Regulations

Canadian Domestic Substances List (DSL) All components listed on inventory or are exempt.

16. Other information

Preparation Information

Prepared By Chemical Stewardship
 Telephone: 1-281-871-6107
 e-mail: fdunexchem@halliburton.com

Revision Date: 22-Jan-2019

Reason for Revision SDS sections updated:
 2
 11
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Additional information

For additional information on the use of this product, contact your local Halliburton representative.

For questions about the Safety Data Sheet for this or other Halliburton products, contact Chemical Stewardship at 1-580-251-4335.

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

bw – body weight

CAS – Chemical Abstracts Service

d - day

EC50 – Effective Concentration 50%

ErC50 – Effective Concentration growth rate 50%

h - hour

LC50 – Lethal Concentration 50%

LD50 – Lethal Dose 50%

LL50 – Lethal Loading 50%

mg/kg – milligram/kilogram

mg/L – milligram/liter

mg/m³ - milligram/cubic meter

mm - millimeter

mmHg - millimeter mercury

NIOSH – National Institute for Occupational Safety and Health

NTP – National Toxicology Program

OEL – Occupational Exposure Limit

PEL – Permissible Exposure Limit

ppm – parts per million

STEL – Short Term Exposure Limit

TWA – Time-Weighted Average

UN – United Nations

w/w - weight/weight

Key literature references and sources for data

www.ChemADVISOR.com/

Disclaimer Statement

This information is furnished without warranty, expressed or implied, as to accuracy or completeness. The information is obtained from various sources including the manufacturer and other third party sources. The information may not be valid under all conditions nor if this material is used in combination with other materials or in any process. Final determination of suitability of any material is the sole responsibility of the user.

End of Safety Data Sheet