

## 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 CO<sub>2</sub>, dry chemical, or foam  
 P391 - Collect spillage

#### Storage

P403 + P235 - Store in a well-ventilated place. Keep cool  
 P405 - Store locked up

#### Disposal

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

<b>Inhalation</b>	If inhaled, move victim to fresh air and seek medical attention.
<b>Eyes</b>	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.
<b>Skin</b>	Wash with soap and water. Get medical attention if irritation persists. Remove contaminated clothing and launder before reuse.
<b>Ingestion</b>	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 <sup>3</sup> TWA: 5 mg/m <sup>3</sup>	TWA: 5 mg/m <sup>3</sup>
Diesel	68476-34-6	Not applicable	TWA: 100 mg/m <sup>3</sup>
Calcium chloride	10043-52-4	Not applicable	Not applicable
Crystalline silica, quartz	14808-60-7	TWA: 50 µg/m <sup>3</sup>	TWA: 0.025 mg/m <sup>3</sup>
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)

	This information is based on literature references and on information provided by glove manufacturers, or is derived by analogy with similar substances. Please note that in practice the working life of chemical-resistant protective gloves may be considerably shorter than the permeation time determined in accordance with EN 374 as a result of the many influencing factors (e.g. temperature). If signs of wear and tear are noticed then the gloves should be replaced. Manufacturer's directions for use should be observed because of great diversity of types.
<b>Skin Protection</b>	Rubber apron.
<b>Eye Protection</b>	Chemical goggles; also wear a face shield if splashing hazard exists.
<b>Other Precautions</b>	None known.

## 9. Physical and Chemical Properties

### 9.1. Information on basic physical and chemical properties

<b>Physical State:</b>	Liquid	<b>Color</b>	Brown
<b>Odor:</b>	Diesel	<b>Odor</b>	No information available
		<b>Threshold:</b>	

<u>Property</u>	<u>Values</u>
<u>Remarks/ - Method</u>	
<b>pH:</b>	No data available
<b>Freezing Point / Range</b>	No data available
<b>Melting Point / Range</b>	No data available
<b>Pour Point / Range</b>	No data available
<b>Boiling Point / Range</b>	148 °C / 300 °F
<b>Flash Point</b>	> 65 °C / > 150 °F (PMCC)
<b>Flammability (solid, gas)</b>	No data available
Upper flammability limit	6
Lower flammability limit	0.7
<b>Evaporation rate</b>	No data available
<b>Vapor Pressure</b>	No data available
<b>Vapor Density</b>	No data available
<b>Specific Gravity</b>	1.44
<b>Water Solubility</b>	Insoluble in water
<b>Solubility in other solvents</b>	No data available
<b>Partition coefficient: n-octanol/water</b>	No data available
<b>Autoignition Temperature</b>	257 °C / 495 °F
<b>Decomposition Temperature</b>	No data available
<b>Viscosity</b>	No data available
<b>Explosive Properties</b>	No information available
<b>Oxidizing Properties</b>	No information available

### 9.2. Other information

<b>VOC Content (%)</b>	No data available
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## 10. Stability and Reactivity

### 10.1. Reactivity

Not expected to be reactive.

### 10.2. Chemical stability

Stable

### 10.3. Possibility of hazardous reactions

Will Not Occur

**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**

Causes mild eye irritation.

**Skin Contact**

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 (Pseudokirchnerella 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 (Skeletonea costatum) EC50 (72 h) >100 mg/L (Pseudokirchnerella subcapitata)	LL50 (96 h) >1000 mg/L (Scophthalmus 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

<b>15. Regulatory Information</b>
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**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
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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/m<sup>3</sup> - 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/](http://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**