

## SAFETY DATA SHEET

**Product Trade Name:** FightR EC-1

**Revision Date:** 14-Dec-2016

**Revision Number:** 1

### 1. Identification

#### 1.1. Product Identifier

**Product Trade Name:** FightR EC-1  
**Synonyms** None  
**Chemical Family:** Polymer Blend  
**Internal ID Code** HM008491

#### 1.2 Recommended use and restrictions on use

**Application:** Friction Reducer  
**Uses advised against** Consumer use

#### 1.3 Manufacturer's Name and Contact Details

**Manufacturer/Supplier**  
Halliburton Energy Services, Inc.  
P.O. Box 1431  
Duncan, Oklahoma 73536-0431

Halliburton Energy Services  
645 - 7th Ave SW Suite 1800  
Calgary, AB  
T2P 4G8  
Canada

**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. Hazard(s) Identification

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

As adopted by the competent authority, this product does not require an SDS or hazard warning label.

Not classified

#### 2.2. Label Elements

**Hazard Pictograms**

**Signal Word:** Not Classified

**Hazard Statements** Not Hazardous

**Precautionary Statements**

Prevention	None
Response	None
Storage	None
Disposal	None

### **2.3 Hazards not otherwise classified**

None known

## **3. Composition/information on Ingredients**

Substances	CAS Number	PERCENT (w/w)	GHS Classification - US
Contains no hazardous substances in concentrations above cut-off values according to the competent authority	NA	60 - 100%	Not classified

The specific chemical identity of the composition has been withheld as proprietary.

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, remove from area to fresh air. Get medical attention if respiratory irritation develops or if breathing becomes difficult.
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.
Ingestion	Do NOT induce vomiting. Rinse mouth with water many times. Get medical attention if symptoms occur

### **4.2 Most important symptoms/effects, acute and delayed**

No significant hazards expected.

### **4.3. Indication of any immediate medical attention and special treatment needed**

Notes to Physician	Treat symptomatically.
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## **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**

Product is not expected to burn unless all the water is boiled away. Decomposition in fire may produce harmful gases. Use water spray to cool fire exposed surfaces.

### **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. Ensure adequate ventilation. Avoid breathing vapors. Avoid contact with skin, eyes and clothing. Spills of this product are very slippery.  
See Section 8 for additional information

**6.2. Environmental precautions**

None known.

**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. Do NOT spread spilled product with water.

**7. Handling and storage****7.1. Precautions for safe handling****Handling Precautions**

Use appropriate protective equipment. Ensure adequate ventilation. Avoid contact with eyes, skin, or clothing. Avoid breathing vapors. Avoid breathing mist.

**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. Store in a cool well ventilated area. Keep container closed when not in use. Store at temperatures between 40 and 90 F (5 and 35 C). Keep from freezing. Product has a shelf life of 6 months.

**8. Exposure Controls/Personal Protection****8.1 Occupational Exposure Limits**

Substances	CAS Number	OSHA PEL-TWA	ACGIH TLV-TWA
Contains no hazardous substances in concentrations above cut-off values according to the competent authority	NA	Not applicable	Not applicable

**8.2 Appropriate engineering controls****Engineering Controls**

Use approved industrial ventilation and local exhaust as required to maintain exposures below applicable exposure limits. Ensure adequate ventilation, especially in confined areas

**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**

Not normally needed. But if significant exposures are possible then the following respirator is recommended:

Organic vapor respirator with a dust/mist filter. (A2P2/P3)

**Hand Protection**

Use gloves which are suitable for the chemicals present in this product as well as other environmental factors in the workplace.

**Skin Protection**

Wear protective clothing appropriate for the work environment.

**Eye Protection**

Safety glasses with side-shields. If splashes are likely to occur, wear: Goggles, Face-shield.

**Other Precautions**

None known.

## 9. Physical and Chemical Properties

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

<b>Physical State:</b> Liquid	<b>Color</b>	Off white
<b>Odor:</b> Hydrocarbon	<b>Odor</b>	No information available
	<b>Threshold:</b>	

<u>Property</u> <u>Remarks/ - Method</u>	<u>Values</u>
<b>pH:</b>	5 - 8
<b>Freezing Point / Range</b>	No data available
<b>Melting Point / Range</b>	< 5 °C / < 41 °F
<b>Boiling Point / Range</b>	> 100 °C / 212 °F
<b>Flash Point</b>	No data available
<b>Flammability (solid, gas)</b>	No data available
Upper flammability limit	No data available
Lower flammability limit	No data available
<b>Evaporation rate</b>	No data available
<b>Vapor Pressure</b>	17.25 mmHg
<b>Vapor Density</b>	No data available
<b>Specific Gravity</b>	1.0 - 1.1
<b>Water Solubility</b>	Miscible with water
<b>Solubility in other solvents</b>	No data available
<b>Partition coefficient: n-octanol/water</b>	No data available
<b>Autoignition Temperature</b>	No data available
<b>Decomposition Temperature</b>	No data available
<b>Viscosity</b>	> 20.5 mm <sup>2</sup> /s
<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

Freezing conditions.  
Extremes of temperature and direct sunlight

### 10.5. Incompatible materials

Strong oxidizers.

### 10.6. Hazardous decomposition products

Carbon monoxide and carbon dioxide. Oxides of nitrogen. Hydrogen cyanide.

## 11. Toxicological Information

### 11.1 Information on likely routes of exposure

**Principle Route of Exposure** Eye or skin contact, inhalation. Ingestion.

## **11.2 Symptoms related to the physical, chemical and toxicological characteristics**

### **Acute Toxicity**

**Inhalation** May cause mild respiratory irritation.  
**Eye Contact** In vitro tests indicate that the product is not an eye irritant.  
**Skin Contact** May cause mild skin irritation.  
**Ingestion** May cause abdominal pain, vomiting, nausea, and diarrhea.

**Chronic Effects/Carcinogenicity** No data available to indicate product or components present at greater than 0.1% are chronic health hazards.

## **11.3 Toxicity data**

### **Toxicology data for the components**

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
Contains no hazardous substances in concentrations above cut-off values according to the competent authority	NA	No data available	No data available	No data available

## **12. Ecological Information**

### **12.1. Toxicity**

#### **Ecotoxicity effects**

Product is not classified as hazardous to the environment.

#### **Substance Ecotoxicity Data**

Substances	CAS Number	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Toxicity to Invertebrates
Contains no hazardous substances in concentrations above cut-off values according to the competent authority	NA	No information available	No information available	No information available	No information available

### **12.2. Persistence and degradability**

Substances	CAS Number	Persistence and Degradability
Contains no hazardous substances in concentrations above cut-off values according to the competent authority	NA	No information available

### **12.3. Bioaccumulative potential**

Bioaccumulation is unlikely

Substances	CAS Number	Log Pow
Contains no hazardous substances in	NA	No information available

concentrations above cut-off values according to the competent authority		
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**12.4. Mobility in soil**

Substances	CAS Number	Mobility
Contains no hazardous substances in concentrations above cut-off values according to the competent authority	NA	No information available

**12.5 Other adverse effects**

No information available

**13. Disposal Considerations****13.1. Waste treatment methods**

**Disposal methods** Follow all applicable community, national or regional regulations regarding waste management methods.

**Contaminated Packaging** Follow all applicable national or local regulations.

**14. Transport Information****US DOT**

UN Number Not restricted  
 UN proper shipping name: Not restricted  
 Transport Hazard Class(es): Not applicable  
 Packing Group: Not applicable  
 Environmental Hazards: Not applicable

**Canadian TDG**

UN Number Not restricted  
 UN proper shipping name: Not restricted  
 Transport Hazard Class(es): Not applicable  
 Packing Group: Not applicable  
 Environmental Hazards: Not applicable

**IMDG/IMO**

UN Number Not restricted  
 UN proper shipping name: Not restricted  
 Transport Hazard Class(es): Not applicable  
 Packing Group: Not applicable  
 Environmental Hazards: Not applicable

**IATA/ICAO**

UN Number Not restricted  
 UN proper shipping name: Not restricted  
 Transport Hazard Class(es): Not applicable  
 Packing Group: Not applicable  
 Environmental Hazards: Not applicable

**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
Contains no hazardous substances in concentrations above cut-off values according to the competent authority	NA	Not applicable

### EPA SARA Title III Extremely Hazardous Substances

Substances	CAS Number	EPA SARA Title III Extremely Hazardous Substances
Contains no hazardous substances in concentrations above cut-off values according to the competent authority	NA	Not applicable

### EPA SARA (311,312) Hazard Class

None

### EPA SARA (313) Chemicals

Substances	CAS Number	Toxic Release Inventory (TRI) - Group I	Toxic Release Inventory (TRI) - Group II
Contains no hazardous substances in concentrations above cut-off values according to the competent authority	NA	Not applicable	Not applicable

### EPA CERCLA/Superfund Reportable Spill Quantity

Substances	CAS Number	CERCLA RQ
Contains no hazardous substances in concentrations above cut-off values according to the competent authority	NA	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

The California Proposition 65 regulations apply to this product.

### MA Right-to-Know Law

One or more components listed.

### NJ Right-to-Know Law

One or more components listed.

### PA Right-to-Know Law

One or more components listed.

### NFPA Ratings:

Health 1, Flammability 1, Reactivity 0

### HMIS Ratings:

Health 1, Flammability 1, Physical Hazard 0, PPE: X

## 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:

14-Dec-2016

**Reason for Revision**

Initial Release

**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/)

OSHA

ECHA C&L

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**End of Safety Data Sheet**