

## FLR PLUS

### SECTION 1. IDENTIFICATION

<b>Product Identifier</b>	FLR PLUS
<b>Other Means of Identification</b>	Gilsonite blend
<b>Recommended Use</b>	Drilling Fluid Additive.
<b>Manufacturer / Supplier</b>	AES Drilling Fluids, LLC, 11767 Katy Freeway, Suite 230, Houston, TX, 77079, Sales & Information, 281-556-5628
<b>Emergency Phone No.</b>	CHEMTREC, 1-800-424-9300, 24-hour Emergency
<b>Date of Preparation</b>	April 01, 2015

### SECTION 2. HAZARDS IDENTIFICATION

#### GHS Classification

OSHA Defined Hazards: Combustible dust

#### GHS Label Elements

Signal Word:

Warning

Hazard Statement(s):

May form combustible dust concentrations in air

Precautionary Statement(s):

Prevention:

Do not breathe dust.

P271 Use only outdoors or in a well-ventilated area.

P264 Wash hands and skin thoroughly after handling.

POTENTIAL HEALTH EFFECTS:

EYE: Dust in eye may result in mechanical irritation.

SKIN: May aggravate dermatitis. Not expected to be an irritant.

INGESTION: May cause gastrointestinal upset. Not expected to be toxic by ingestion.

INHALATION: Prolonged inhalation may cause difficulty in breathing. Should not be an irritant at airborne concentrations below 5 mg/m<sup>3</sup>.

Response:

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

P302 + P352 IF ON SKIN: Wash with plenty of water.

P332 + P313 If skin irritation occurs: Get medical advice/attention.

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.

P304 + P341 IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.

IF INGESTED: Should not present an ingestion problem.

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

Storage:

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

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Substance:

Chemical Name	CAS No.	%	Other Identifiers
GILSONITE	012002-43-6	100	

## SECTION 4. FIRST-AID MEASURES

### First-aid Measures

#### Inhalation

Move to fresh air. Get medical advice/attention if you feel unwell or are concerned.

#### Skin Contact

Wash gently and thoroughly with lukewarm, gently flowing water and mild soap. If irritation persists, get medical advice/attention.

#### Eye Contact

Flush eyes with large quantities of water for 15 minutes. Obtain medical assistance if irritation persists.

#### Ingestion

Rinse mouth with water. Get medical advice/attention if you feel unwell or are concerned.

## SECTION 5. FIRE-FIGHTING MEASURES

### Suitable Extinguishing Media

Carbon Dioxide, Foam, Dry chemical, Water.

### Specific Hazards Arising from the Chemical

At very high dust concentrations, product may form combustible dust concentrations or explosive dust-air mixtures. Oxides of carbon oxides of nitrogen.

### Special Protective Equipment and Precautions for Fire-fighters

When fighting chemical fires, emergency responders should wear NIOSH approved self contained breathing apparatus and appropriate protective clothing.

## SECTION 6. ACCIDENTAL RELEASE MEASURES

### Personal Precautions, Protective Equipment, and Emergency Procedures

Use the personal protective equipment recommended in Section 8 of this safety data sheet.

### Environmental Precautions

Prevent product from entering drains, soil, ditches, sewers, waterways and/or groundwater.

### Methods and Materials for Containment and Cleaning Up

Collect using shovel/scoop or approved HEPA vacuum and place in a suitable container for disposal. Avoid dry sweeping. If necessary, use a dust suppressant such as water. Do not use compressed air for clean-up. Containerize for solid waste disposal. Clean up residual contamination with water and place in appropriate containers for disposal. Dispose of according to local, state and federal regulations.

## SECTION 7. HANDLING AND STORAGE

### Precautions for Safe Handling

Avoid breathing in dust. Avoid skin and eye contact. Only use where there is adequate ventilation. Do not eat, drink or smoke in areas where product is handled. Employees should wash hands after working with product and before going on breaks outside of the work area. See Section 8 for appropriate Personal Protective Equipment (PPE). Avoid generating dusts. Dust may form an explosive mixture with air at high concentrations. Eliminate heat and ignition sources such as sparks, open flames, hot surfaces and static discharge. Post "No Smoking" signs.

### Conditions for Safe Storage

Store in an area that is: cool, ventilated. Away from open flames, excessive heat or sources of ignition. Separate from incompatible materials use good housekeeping to prevent accumulation of dust.

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## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control Parameters

Chemical Name	ACGIH® TLV®		OSHA PEL		AIHA® WEEL™	
	TWA	STEL [C]	TWA	Ceiling	8-hr TWA	Short-term TWA [C]
GILSONITE	3 mg/m3 (R)	Not established	5 mg/m3 (R)	Not established	Not established	Not established

ACGIH® = American Conference of Governmental Industrial Hygienists. TLV® = Threshold Limit Value. TWA = Time-Weighted Average. R = Respirable fraction. STEL = Short-term Exposure Limit. C = Ceiling limit. OSHA = US Occupational Safety and Health Administration. PEL = Permissible Exposure Limits. AIHA® = AIHA® Guideline Foundation. WEEL™ = Workplace Environmental Exposure Limit. Control parameter values for respirable dust.

### Appropriate Engineering Controls

Use local exhaust ventilation, if general ventilation is not adequate to control amount in the air. A suitable eyewash station should be within acceptable distance to the work area.

### Individual Protection Measures

#### Eye/Face Protection

Use goggles or face shield when there is risk of eye contact or visible dust produced.

#### Skin Protection

Wear appropriate gloves while handling product. Wear long sleeves, long pants and appropriate footwear while working with product.

#### Respiratory Protection

If engineering controls are not adequate to maintain airborne contaminant concentrations at levels adequate to protect worker health, an approved respirator may be appropriate.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

### Basic Physical and Chemical Properties

Appearance	Black lumps.
Odour	Faint
pH	Not available
Melting Point/Freezing Point	Not available (melting); Not available (freezing)
Initial Boiling Point/Range	Not available
Flash Point	Not available
Evaporation Rate	Not available
Flammability (solid, gas)	Not available
Upper/Lower Flammability or Explosive Limit	Not available (upper); Not available (lower)
Vapour Pressure	Not available
Vapour Density (air = 1)	Not available
Relative Density (water = 1)	1.04 - 1.08
Solubility	Slightly soluble in water
Auto-ignition Temperature	Not available
Other Information	
Physical State	Solid

## SECTION 10. STABILITY AND REACTIVITY

### Reactivity

Not reactive under normal conditions of use.

### Chemical Stability

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Stable under normal conditions.

**Possibility of Hazardous Reactions**

None expected under normal conditions of storage and use.

**Conditions to Avoid**

Strong Oxidizing Agents. Sparks. Heat. Open flames.

**Incompatible Materials**

Strong Oxidizing Agents.

**Hazardous Decomposition Products**

Oxides of carbon. Oxides of nitrogen.

**SECTION 11. TOXICOLOGICAL INFORMATION**

**Likely Routes of Exposure**

Inhalation; skin contact; eye contact; ingestion.

**Acute Toxicity**

Chemical Name	LC50	LD50 (oral)	LD50 (dermal)
GILSONITE	Not available	Not available	Not available

**Skin Corrosion/Irritation**

May aggravate dermatitis.

**Serious Eye Damage/Irritation**

May cause mechanical irritation to eyes.

**STOT (Specific Target Organ Toxicity) - Single Exposure**

**Inhalation**

High dust levels may cause irritation of the respiratory tract.

**Skin Absorption**

No information was located.

**Ingestion**

May cause irritation of the gastrointestinal tract.

**STOT (Specific Target Organ Toxicity) - Repeated Exposure**

Prolonged exposure to high dust concentrations may cause difficulty breathing.

**Respiratory and/or Skin Sensitization**

Not known to be a respiratory sensitizer. Not known to be a skin sensitizer.

**Carcinogenicity**

Chemical Name	IARC	ACGIH®	NTP	OSHA
GILSONITE	Not Listed	Not Listed	Not Listed	Not Listed

Data gathered from studies suggest that gilsonite is not carcinogenic and has a low order of toxicity. Though evidently not a carcinogen in its normal state, the complex hydrocarbon structure of gilsonite may be altered by extremely high temperatures, possibly producing carcinogenic substances. Inhalation of vapor or mists produced in high-temperature processes using this product should be avoided. Skin should be covered when these vapors or mists are present.

**Key to Abbreviations**

IARC = International Agency for Research on Cancer. ACGIH® = American Conference of Governmental Industrial Hygienists. NTP = National Toxicology Program. OSHA = US Occupational Safety and Health Administration.

**Reproductive Toxicity**

**Development of Offspring**

No information was located.

**Sexual Function and Fertility**

No information was located.

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## Germ Cell Mutagenicity

No information was located.

## SECTION 12. ECOLOGICAL INFORMATION

Do not allow product to contaminate domestic or irrigation water supplies, lakes, streams, ponds or rivers.

### Toxicity

No information was located.

#### Acute Aquatic Toxicity

Chemical Name	LC50 Fish	EC50 Crustacea	ErC50 Aquatic Plants	ErC50 Algae
GILSONITE	Not available	Not available	Not available	Not available

### Persistence and Degradability

No information was located.

### Bioaccumulative Potential

No information was located.

### Mobility in Soil

Studies are not available.

## SECTION 13. DISPOSAL CONSIDERATIONS

### Disposal Methods

Dispose of in accordance with all local, state and federal regulations. Not classified as RCRA Hazardous. RCRA WASTE NUMBER: Not Applicable.

## SECTION 14. TRANSPORT INFORMATION

Not regulated under US DOT Regulations.

## SECTION 15. REGULATORY INFORMATION

### Safety, Health and Environmental Regulations

#### USA

#### Toxic Substances Control Act (TSCA) Section 8(b)

All ingredients are listed on the TSCA Inventory.

#### Additional USA Regulatory Lists

CERCLA: Product does not contain any chemicals subject to the reporting requirement of CERCLA.

SARA Title III - Section 302: No listed components.

SARA Title III - Section 311/312: None

SARA Title III - Section 313: None.

## SECTION 16. OTHER INFORMATION

**NFPA Rating**      **Health - 0**      **Flammability - 1**      **Instability - 0**

**SDS Prepared By**      AES Drilling Fluids

**Phone No.**      281-556-5628

**Date of Preparation**      April 01, 2015

**Disclaimer**      Do not handle or use until precautions on MSDS are read and understood. The information on this form is furnished solely for the purpose of enabling those who transport, handle or use our products to ensure the safety and health of their employees and to comply with various laws and regulations (federal, state and local). We believe the statements, technical information and recommendations contained herein are reliable but, they are given without warranty or guarantee of any kind, express or implied and we assume no responsibility for any loss,

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damage, direct or consequential, arising out of their use.