

## EO SEAL

### SECTION 1. IDENTIFICATION

|                                      |  |
|--------------------------------------|--|
| <b>Product Identifier</b>            | EO SEAL  |
| <b>Other Means of Identification</b> | Fluid Loss Control   |
| <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>           | May 05, 2015   |

### SECTION 2. HAZARDS IDENTIFICATION

#### GHS Classification

OSHA Defined Hazards: Combustible dust

#### GHS Label Elements

Signal Word:

Warning

Hazard Statement(s):

Dust in eye may result in mechanical irritation.

May form combustible dust concentrations in air

Precautionary Statement(s):

Prevention:

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

P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response:

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

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

Storage:

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

#### Other Hazards

This material is classified as not hazardous under OSHA regulations.

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture:

| Chemical Name     | CAS No. | %     | Other Identifiers |
|-------------------|---------|-------|-------------------|
| Natural Cellulose | CBI*    | 90-98 |                   |
| Trade Secret      | CBI*    | 2-10  |                   |

#### Notes

The specific chemical identity and/or exact percentage of composition (concentration) has been withheld as a trade secret.

Product Identifier: EO SEAL

Date of Preparation: May 05, 2015

Page 01 of 06

## SECTION 4. FIRST-AID MEASURES

### First-aid Measures

#### Inhalation

Remove source of exposure or 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 develops, seek medical attention.

#### Eye Contact

Flush eyes thoroughly with lukewarm water for 15 minutes. If eye irritation persists, get medical advice/attention.

#### Ingestion

Rinse mouth with water. If large amounts are ingested, give water to drink and get medical advice.

## SECTION 5. FIRE-FIGHTING MEASURES

### Suitable Extinguishing Media

Carbon dioxide, dry chemical powder, appropriate foam, water spray or fog.

### 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.

### 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

See Section 8 for appropriate personal protective equipment. Keep out unnecessary and unprotected personnel.

### Environmental Precautions

It is good practice to prevent releases into the environment.

### Methods and Materials for Containment and Cleaning Up

Eliminate all ignition sources. Avoid generating dust. Vacuum or sweep product up, try to minimize dust build-up. Place solid waste in a sealed container for disposal in accordance with local environmental and public health regulations. Collect using shovel/scoop or approved HEPA vacuum and place in a suitable container for disposal. Vacuum or sweep product up, try to minimize dust build-up. Wet sweeping may be used to minimize dust build-up. Containerize for solid waste disposal. Dispose of according to local, state and federal regulations.

## SECTION 7. HANDLING AND STORAGE

### Precautions for Safe Handling

Avoid breathing in dust. Avoid contact with eyes, skin and clothing. Do not ingest product. Keep away from sources of ignition, No Smoking while working with this product. Wash hands thoroughly after handling this material. Wear personal protective equipment to avoid direct contact with this chemical. See Section 8 for appropriate Personal Protective Equipment (PPE). Only use where there is adequate ventilation. Avoid creating excessive dust while handling the product. Dust may form an explosive mixture with air at high concentrations.

### Conditions for Safe Storage

Store in an area that is: cool, dry, well-ventilated. Away from open flames, excessive heat or sources of ignition. Keep containers tightly closed when not in use. Use good housekeeping to prevent accumulation of dust.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Product Identifier: EO SEAL

Date of Preparation: May 05, 2015

Page 02 of 06

## Control Parameters

| Chemical Name     | ACGIH® TLV®     |          | OSHA PEL        |         | AIHA® WEEL™     |                    |
|-------------------|-----------------|----------|-----------------|---------|-----------------|--------------------|
|                   | TWA             | STEL [C] | TWA             | Ceiling | 8-hr TWA        | Short-term TWA [C] |
| Natural Cellulose | 10 mg/m3        |          | 5 mg/m3 (R)     |         | Not established |                    |
| Trade Secret      | Not established |          | Not established |         | Not established |                    |

ACGIH® = American Conference of Governmental Industrial Hygienists. TLV® = Threshold Limit Value. TWA = Time-Weighted Average. OSHA = US Occupational Safety and Health Administration. PEL = Permissible Exposure Limits. AIHA® = AIHA® Guideline Foundation. WEEL™ = Workplace Environmental Exposure Limit. R = Respirable fraction.

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 conditions of use promote large amounts of dust to gather in the work area, wear NIOSH approved dust mask or respirator.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

### Basic Physical and Chemical Properties

|  |   |
|--|---|
| Appearance                                       | Light tan - brown powder.                         |
| Odour  | Faint   |
| Odour Threshold                                  | Not available                                     |
| 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)                     | 1.4   |
| Solubility                                       | Insoluble in water                                |
| Partition Coefficient, n-Octanol/Water (Log Kow) | Not available                                     |
| Auto-ignition Temperature                        | Not available                                     |
| Other Information                                |   |
| Physical State                                   | Solid   |

Product Identifier: EO SEAL

Date of Preparation: May 05, 2015

Page 03 of 06

## SECTION 10. STABILITY AND REACTIVITY

### Reactivity

Not reactive under normal conditions of use.

### Chemical Stability

Stable under normal conditions.

### Possibility of Hazardous Reactions

None expected under normal conditions of storage and use.

### Conditions to Avoid

Strong oxidizers.

### Incompatible Materials

Strong Oxidizing Agents.

### Hazardous Decomposition Products

Product does not decompose at ambient temperatures.

## SECTION 11. TOXICOLOGICAL INFORMATION

### Likely Routes of Exposure

Inhalation; skin contact; eye contact; ingestion.

### Acute Toxicity

| Chemical Name     | LC50   | LD50 (oral)        | LD50 (dermal)         |
|-------------------|--|--------------------|-----------------------|
| Natural Cellulose | > 5800 mg/m <sup>3</sup> (rat) (4-hour exposure) | > 5000 mg/kg (rat) | > 2000 mg/kg (rabbit) |
| Trade Secret      | Not available                                    | Not available      | Not available         |

### Skin Corrosion/Irritation

May cause skin irritation.

### Serious Eye Damage/Irritation

May cause mechanical irritation to eyes.

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

#### Inhalation

May cause irritation of the mucous membranes and upper respiratory tract.

#### Ingestion

May cause irritation of the gastrointestinal tract. Symptoms may include nausea, vomiting, stomach cramps and diarrhea.

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

No known significant effects.

### Respiratory and/or Skin Sensitization

Not a respiratory sensitizer. Not a skin sensitizer.

### Carcinogenicity

| Chemical Name     | IARC       | ACGIH®         | NTP        | OSHA       |
|-------------------|------------|----------------|------------|------------|
| Natural Cellulose | Not Listed | Not Listed     | Not Listed | Not Listed |
| Trade Secret      | Not Listed | Not designated | Not Listed | Not Listed |

Not known to cause cancer.

Key to Abbreviations

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

### Reproductive Toxicity

Product Identifier: EO SEAL

Date of Preparation: May 05, 2015

Page 04 of 06

**Development of Offspring**

No information was located.

**Germ Cell Mutagenicity**

No information was located.

**Interactive Effects**

No information was located.

**SECTION 12. ECOLOGICAL INFORMATION****Toxicity**

No information was located.

**Acute Aquatic Toxicity**

| Chemical Name     | LC50 Fish     | EC50 Crustacea | ErC50 Aquatic Plants | ErC50 Algae   |
|-------------------|---------------|----------------|----------------------|---------------|
| Natural Cellulose | Not available | Not available  |                      | Not available |
| Trade Secret      | Not available | Not available  | Not available        | Not available |

**Persistence and Degradability**

No information was located.

**Bioaccumulative Potential**

No information was located.

**Mobility in Soil**

No information was located.

**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.

**Special Precautions for User** Not applicable

**Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code**

Not applicable

**SECTION 15. REGULATORY INFORMATION****Safety, Health and Environmental Regulations****USA****Toxic Substances Control Act (TSCA) Section 8(b)**

All ingredients are on the TSCA Inventory or are exempt from TSCA Inventory requirements under 40 CFR 720.

**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: No listed components.

SARA Title III - Section 313: None.

**SECTION 16. OTHER INFORMATION**

Product Identifier: EO SEAL

Date of Preparation: May 05, 2015

---

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

**SDS Prepared By**      AES Drilling Fluids

**Phone No.**              281-556-5628

**Date of Preparation**    May 05, 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, damage, direct or consequential, arising out of their use.

---

Product Identifier:      EO SEAL

Date of Preparation:    May 05, 2015

Page 06 of 06