

## ENERBLACK

### SECTION 1. IDENTIFICATION

<b>Product Identifier</b>	ENERBLACK
<b>Other Means of Identification</b>	Drilling fluid additive
<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 19, 2015

### SECTION 2. HAZARDS IDENTIFICATION

#### GHS Classification

Acute toxicity (Oral) - Category 4; Acute toxicity (Dermal) - Category 4; Acute toxicity (Inhalation) - Category 5; Skin corrosion/irritation - Category 2; Serious eye damage/eye irritation - Category 2A; Specific target organ toxicity (repeated exposure) - Category 2; Aspiration hazard - Category 2

#### GHS Label Elements



Signal Word:

Warning

Hazard Statement(s):

H302	Harmful if swallowed.
H305	May be harmful if swallowed and enters airways.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H333	May be harmful if inhaled.
H373	May cause damage to organs through prolonged or repeated exposure.

Precautionary Statement(s):

Prevention:

P260	Do not breathe mist, vapours, spray.
P262	Do not get in eyes, on skin, or on clothing.
P264	Wash hands and skin thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P280	Wear protective gloves/eye protection/face protection.

Response:

P301 + P310	IF SWALLOWED: Immediately call a POISON CENTRE/doctor.
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.

---

Product Identifier: ENERBLACK

Date of Preparation: May 19, 2015

Page 01 of 06

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.  
 P312 Call a POISON CENTRE/doctor if you feel unwell.  
 P362 + P364 Take off contaminated clothing and wash it before reuse.  
 Storage:  
 P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	%	Other Identifiers
Polyglycol	CBI*	30-60	
Gilsocol	CBI*	30-60	
Solvent	CBI*	1-10	
Silicate	CBI*	1-5	

#### Notes

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

CBI = Confidential Business Information.

### SECTION 4. FIRST-AID MEASURES

#### First-aid Measures

##### Inhalation

Remove source of exposure or move to fresh air. Keep at rest in a position comfortable for breathing. Call a Poison Centre or doctor if you feel unwell or are concerned.

##### Skin Contact

Take off contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Wash gently and thoroughly with lukewarm, gently flowing water and mild soap for 5 minutes. Thoroughly clean clothing, shoes and leather goods before reuse or dispose of safely. If skin irritation occurs get medical advice/attention.

##### Eye Contact

Immediately rinse the contaminated eye(s) with lukewarm, gently flowing water for 15-20 minutes, while holding the eyelid(s) open. Remove contact lenses, if present and easy to do. If eye irritation persists, get medical advice/attention.

##### Ingestion

Rinse mouth with water. Do not induce vomiting without medical advice. If vomiting occurs, have victim lean forward to reduce the risk of aspiration. Immediately call a Poison Centre or doctor.

### SECTION 5. FIRE-FIGHTING MEASURES

#### Suitable Extinguishing Media

Carbon Dioxide, Foam, Dry chemical. Alcohol-resistant foams Water spray or fog, do not use a direct stream as this may spread the fire.

#### Specific Hazards Arising from the Chemical

Heating increases the release of toxic vapour. Closed containers may rupture violently when heated releasing contents.

Oxides of carbon toxic fumes.

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

Do not use a solid stream of foam into hot, burning pools: this may causing frothing and increase fire intensity. Use water spray to cool containers/tanks. Dike and collect water used to fight fire.

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

### SECTION 6. ACCIDENTAL RELEASE MEASURES

Product Identifier: ENERBLACK

Date of Preparation: May 19, 2015

Page 02 of 06

## Personal Precautions, Protective Equipment, and Emergency Procedures

Keep out unnecessary and unprotected personnel. Use the personal protective equipment recommended in Section 8 of this safety data sheet.

### Environmental Precautions

Do not allow into any sewer, on the ground or into any waterway. If the spill is inside a building, prevent product from entering drains, ventilation systems and confined areas. Prevent product from entering drains, soil, ditches, sewers, waterways and/or groundwater.

### Methods and Materials for Containment and Cleaning Up

Eliminate all ignition sources. Dike spilled product to prevent runoff. Remove or recover liquid using pumps or vacuum equipment. Dilute spill with water and mop up, or absorb with an inert dry absorbent material. Store recovered product or absorbent material in suitable containers for disposal according to local regulations.

### Other Information

Contact EH&S regarding spill as spills of certain products and certain quantities may require reporting to various authorities.

## SECTION 7. HANDLING AND STORAGE

### Precautions for Safe Handling

Avoid breathing in this product. Do not get in eyes, on skin or on clothing. 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. Wash hands thoroughly after handling this product and before eating, using the washroom or leaving work area. Only use where there is adequate ventilation. Wear personal protective equipment to avoid direct contact with this chemical. See Section 8 for appropriate Personal Protective Equipment (PPE).

### 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.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control Parameters

Not available.

No information was located.

### Appropriate Engineering Controls

Use local exhaust ventilation, if general ventilation is not adequate to control amount in the air. While working with the product an eyewash and safety shower should be within acceptable distance to the work area.

### Individual Protection Measures

#### Eye/Face Protection

Safety glasses or goggles. Use chemical goggles or a face shield if product could be splashed.

#### Skin Protection

Wear gloves with appropriate chemical resistance, see manufacturers specifications for suitability. Wear long sleeves, long pants and appropriate footwear while working with product.

#### Respiratory Protection

If conditions exist above the OEL wear a NIOSH approved respirator with an appropriate cartridge.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

### Basic Physical and Chemical Properties

<b>Appearance</b>	Black liquid.
<b>Odour</b>	Odourless
<b>pH</b>	Neutral
<b>Melting Point/Freezing Point</b>	Not available (melting); Not available (freezing)
<b>Initial Boiling Point/Range</b>	Not available
<b>Flash Point</b>	> 200 °F (93 °C)

Product Identifier: ENERBLACK

Date of Preparation: May 19, 2015

Page 03 of 06

<b>Evaporation Rate</b>	Not available
<b>Flammability (solid, gas)</b>	Not available
<b>Upper/Lower Flammability or Explosive Limit</b>	Not available (upper); Not available (lower)
<b>Vapour Pressure</b>	Not available
<b>Vapour Density (air = 1)</b>	Not available
<b>Relative Density (water = 1)</b>	1.04
<b>Solubility</b>	Moderately soluble in water
<b>Partition Coefficient, n-Octanol/Water (Log Kow)</b>	Not available
<b>Auto-ignition Temperature</b>	Not available
<b>Decomposition Temperature</b>	Not available
<b>Other Information</b>	
<b>Physical State</b>	Liquid

## SECTION 10. STABILITY AND REACTIVITY

### Reactivity

Not reactive under normal conditions of use.

### Chemical Stability

Normally stable.

### Possibility of Hazardous Reactions

None expected under normal conditions of storage and use.

### Conditions to Avoid

None known.

### Incompatible Materials

None known.

### Hazardous Decomposition Products

None known.

## SECTION 11. TOXICOLOGICAL INFORMATION

### Likely Routes of Exposure

Inhalation; skin contact; skin absorption; eye contact; ingestion.

### Acute Toxicity

LC50: No information was located.

The oral LD50 for rats is between 1000-2000 mg/kg.

The LD50 for skin absorption in rabbits is >2000 mg/kg.

### Skin Corrosion/Irritation

May cause moderate to severe skin irritation.

### Serious Eye Damage/Irritation

May cause moderate to severe eye irritation.

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

#### Inhalation

Material is irritating to mucous membranes and upper respiratory tract. At high concentrations symptoms may include headache, nausea, dizziness, drowsiness and confusion.

#### Skin Absorption

Ingredients of this product can be absorbed through the skin.

#### Ingestion

Product Identifier: ENERBLACK

Date of Preparation: May 19, 2015

Page 04 of 06

Product is harmful if ingested. May cause irritation of the mouth, throat and stomach.

#### **Aspiration Hazard**

Liquid may be aspirated into the lungs during ingestion or vomiting resulting in lung injury.

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

Prolonged skin contact may cause defatting of the skin resulting in irritation and conditions such as dermatitis. Prolonged exposures to high vapour concentrations can cause headache, dizziness, nausea, blurred vision and depression of central nervous system.

#### **Respiratory and/or Skin Sensitization**

No information was located.

#### **Carcinogenicity**

Conclusions cannot be drawn from the limited studies available. For diethyltoluenediamine, in vitro mutagenicity studies were negative in some cases and positive in other cases. Animal mutagenicity studies were negative.

#### **Reproductive Toxicity**

##### **Development of Offspring**

No information was located.

##### **Sexual Function and Fertility**

No information was located.

##### **Effects on or via Lactation**

No information was located.

#### **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.

#### **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.

## **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 exempt from the TSCA.

##### **Additional USA Regulatory Lists**

---

Product Identifier: ENERBLACK

Date of Preparation: May 19, 2015

Page 05 of 06

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: No chemicals are reportable under Section 313.

## SECTION 16. OTHER INFORMATION

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

**SDS Prepared By**                AES Drilling Fluids

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

**Date of Preparation**            May 19, 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:                ENERBLACK

Date of Preparation:            May 19, 2015

Page 06 of 06