

## Glass Beads

### SECTION 1. IDENTIFICATION

<b>Product Identifier</b>	Glass Beads
<b>Other Means of Identification</b>	Lubricant
<b>Recommended Use</b>	Drilling Fluid Additive.
<b>Manufacturer/Supplier Identifier</b>	AES Drilling Fluids, LLC, 11767 Katy Freeway, Suite 230, Houston, TX, 77079, Sales & Information, 281-556-5628
<b>Emergency Phone No.</b>	AES Drilling Fluids, LLC, 1-888-556-4533
<b>Date of Preparation</b>	August 18, 2015

### SECTION 2. HAZARD IDENTIFICATION

#### Classification

Not classified under any hazard class.

#### Label Elements

Not applicable

#### Other Hazards

EYE: Dust in eye may result in mechanical irritation.

INHALATION: May result in irritation of mucous membranes.

SKIN: May cause skin irritation.

INGESTION: May be irritating to mouth throat and stomach.

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Contains no hazardous ingredients.

Chemical Name	CAS No.	%	Other Identifiers
Fibrous glass	65997-17-3	100	

### SECTION 4. FIRST-AID MEASURES

#### First-aid Measures

##### Inhalation

Remove source of exposure or move to fresh air. Get medical advice or attention if you feel unwell or are concerned.

##### Skin Contact

Wash gently and thoroughly with lukewarm, gently flowing water and mild soap for 5 minutes. Get medical advice or attention if you feel unwell or are concerned.

##### Eye Contact

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

##### Ingestion

Rinse mouth with water. Do not induce vomiting. Seek immediate medical attention.

#### Most Important Symptoms and Effects, Acute and Delayed

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May cause moderate to severe irritation.

## SECTION 5. FIRE-FIGHTING MEASURES

### Extinguishing Media

#### Suitable Extinguishing Media

Not combustible. Use extinguishing agent suitable for surrounding fire.

### Specific Hazards Arising from the Product

This product presents no unusual hazards in a fire situation. Does not burn.

Not known to generate any hazardous decomposition products in a fire.

### 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

Keep out unnecessary and unprotected personnel. Ensure adequate ventilation in area. Use the personal protective equipment recommended in Section 8 of this safety data sheet. Remove or isolate incompatible materials as well as other hazardous materials.

### Environmental Precautions

It is good practice to prevent releases into the environment.

### Methods and Materials for Containment and Cleaning Up

Avoid generating dust. Avoid dry sweeping. If necessary, use a dust suppressant such as water. Do not use compressed air for clean-up. Spill material may cause floors and contact surfaces to become slippery, flush slowly with water, collect and store in suitable containers. Collect using shovel/scoop or approved HEPA vacuum and place in a suitable container for disposal. 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. Avoid contact with eyes, skin and clothing. Avoid creating excessive dust while handling the product. 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.

### Conditions for Safe Storage

Store in an area that is: dry, cool, well-ventilated. Separate from incompatible materials keep containers tightly closed when not in use. Use good housekeeping to prevent accumulation of dust.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control Parameters

Chemical Name	ACGIH® TLV®		Alberta		SASK	
	TWA	STEL [C]	OEL	STEL	OEL	STEL
Fibrous glass	1 f/cc (F)		1 f/cc (F)		1 f/cc (F)	3 f/cc (F)

ACGIH® = American Conference of Governmental Industrial Hygienists. TLV® = Threshold Limit Value. STEL = Short-term Exposure Limit. C = Ceiling limit. OEL = Occupational Exposure Limit r = Respirable fraction. Product may cause irritation similar to nuisance dust and meet the criteria of Particulates Not Otherwise Specified, respirable particles. or inhalable particles.

### Appropriate Engineering Controls

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Use local exhaust ventilation, if general ventilation is not adequate to control amount in the air.

### Individual Protection Measures

#### Eye/Face Protection

Safety glasses with side shields are recommended to prevent eye contact. Use goggles or face shield when there is risk of eye contact or visible dust produced.

#### 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 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

<b>Appearance</b>	White crystalline powder.
<b>Odour</b>	Odourless
<b>Odour Threshold</b>	Not available
<b>pH</b>	Not available
<b>Melting Point/Freezing Point</b>	~ 730 °C (1346 °F) (melting); Not available (freezing)
<b>Initial Boiling Point/Range</b>	Not available
<b>Flash Point</b>	Not available
<b>Evaporation Rate</b>	Not available
<b>Flammability (solid, gas)</b>	Will not burn.
<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>	Not available
<b>Solubility</b>	Insoluble 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>Viscosity</b>	Not available (kinematic); Not available (dynamic)
<b>Other Information</b>	
<b>Physical State</b>	Solid

## SECTION 10. STABILITY AND REACTIVITY

### Reactivity

Not reactive under normal conditions of use. Avoid contact with strong acids.

### Chemical Stability

Stable under normal conditions.

### Possibility of Hazardous Reactions

None expected under normal conditions of storage and use.

### Conditions to Avoid

None known.

### Incompatible Materials

Strong acids.

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## Hazardous Decomposition Products

No decomposition if stored and applied as directed.

## SECTION 11. TOXICOLOGICAL INFORMATION

### Likely Routes of Exposure

Inhalation; eye contact; skin contact; ingestion. dust may result in irritation of skin, eye or respiratory system.

### Acute Toxicity

Chemical Name	LC50	LD50 (oral)	LD50 (dermal)
Fibrous glass	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.

#### Skin Absorption

No information was located.

#### Ingestion

No information was located.

### Aspiration Hazard

No information was located.

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

No information was located.

### Respiratory and/or Skin Sensitization

Not a skin sensitizer. May cause respiratory irritation, not classified.

### Carcinogenicity

Chemical Name	IARC	ACGIH®	NTP	OSHA
Fibrous glass	Group 2B	A3	Reasonably anticipated	Not Listed

### Key to Abbreviations

IARC = International Agency for Research on Cancer. Group 2B = Possibly carcinogenic to humans.

ACGIH® = American Conference of Governmental Industrial Hygienists. A3 = Animal carcinogen.

NTP = National Toxicology Program. Reasonably anticipated = Reasonably anticipated human carcinogen.

OSHA = US Occupational Safety and Health Administration.

### Reproductive Toxicity

#### Development of Offspring

Conclusions cannot be drawn from the limited studies available.

#### Sexual Function and Fertility

No information was located.

#### Effects on or via Lactation

No information was located.

### Germ Cell Mutagenicity

Not known to be a mutagen.

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## SECTION 12. ECOLOGICAL INFORMATION

Environmental information was not located.

### Ecotoxicity

No information was located.

### Acute Aquatic Toxicity

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

### Persistence and Degradability

This material is persistent but inert in aquatic system. It will not bioconcentrate up the food chain.

### Bioaccumulative Potential

This product and its degradation products are not known to bioaccumulate.

### Mobility in Soil

Studies are not available.

### Other Adverse Effects

There is no information available.

## SECTION 13. DISPOSAL CONSIDERATIONS

### Disposal Methods

Dispose of unused product in accordance with local environmental and public health regulations.

## SECTION 14. TRANSPORT INFORMATION

Not regulated under Canadian TDG regulations. Not regulated under US DOT Regulations.

## SECTION 15. REGULATORY INFORMATION

### Safety, Health and Environmental Regulations

#### Canada

#### Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)

All ingredients are listed on the DSL or are not required to be listed.

#### 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

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: No listed components.

## SECTION 16. OTHER INFORMATION

**SDS Prepared By** HSE Department

**Phone No.** 403-269-2800

**Date of Preparation** August 18, 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

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guarantee of any kind, express or implied and we assume no responsibility for any loss, damage, direct or consequential, arising out of their use.