

Mica (All Grades)

SECTION 1. IDENTIFICATION

Product Identifier Mica (All Grades)
Other Means of Identification Fluid Loss Control
Recommended Use Drilling Fluid Additive.
Manufacturer/Supplier Identifier AES Drilling Fluids, LLC, 11767 Katy Freeway, Suite 230, Houston, TX, 77079, Sales & Information, 281-556-5628
Emergency Phone No. AES Drilling Fluids, LLC, 1-888-556-4533
Date of Preparation October 16, 2015

SECTION 2. HAZARD IDENTIFICATION

Classified according to the US Hazard Communication Standard (HCS 2012).

Classification

Carcinogenicity - Category 1A

Label Elements



Signal Word:

Danger

Hazard Statement(s):

H350 May cause cancer.

Precautionary Statement(s):

Prevention:

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P280 Wear protective gloves, eye protection.

Response:

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

Storage:

P405 Store locked up.

Disposal:

P501 Dispose of contents and container in accordance with local, regional, national and international regulations.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance:

Chemical Name	CAS No.	%	Other Identifiers
vermiculite	1318-00-9	60 - 100	
Silica, quartz	14808-60-7	< 1	

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Notes

Concentrations are expressed in % weight/weight.

SECTION 4. FIRST-AID MEASURES

First-aid Measures

Inhalation

Remove source of contaminant or move to fresh air. Get medical advice/attention if irritation develops.

Skin Contact

Wash gently and thoroughly with lukewarm, gently flowing water and mild soap for 5 minutes. If irritation persists, get medical advice/attention.

Eye Contact

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

Ingestion

Rinse mouth with water. Seek medical advice.

SECTION 5. FIRE-FIGHTING MEASURES

Specific Hazards Arising from the Product

Does not burn.

Special Protective Equipment and Precautions for Fire-fighters

Dust is subject to combustion when exposed to ignition sources in heated environments.

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. Ensure adequate ventilation in area. Avoid dust formation.

Environmental Precautions

It is good practice to prevent releases into the environment. Do not allow into any sewer, on the ground or into any waterway.

Methods and Materials for Containment and Cleaning Up

Vacuum or sweep product up, try to minimize dust build-up. Wet sweeping may be used to minimize dust build-up. Store recovered product in suitable containers that are: tightly-covered. For reuse or disposal.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling

It is good practice to: avoid breathing product; avoid skin and eye contact and wash hands after handling. Only use where there is adequate ventilation. Avoid creating excessive dust while handling the product. See Section 8 for appropriate Personal Protective Equipment (PPE). Eliminate ignition sources in dusty conditions.

Conditions for Safe Storage

Store in an area that is: dry, well-ventilated. Keep containers tightly closed when not in use. Use good housekeeping to prevent accumulation of dust.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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Control Parameters

Chemical Name	ACGIH® TLV®		OSHA PEL		AIHA® WEEL®	
	TWA	STEL [C]	TWA	Ceiling	8-hr TWA	Short-term TWA [C]
Silica, quartz	0.025 mg/m3 A2	Not established	0.1 mg/m3	Not established	Not established	Not established
vermiculite	3 mg/m3	10 mg/m3	15 mg/m3	Not established	Not established	Not established

ACGIH® = American Conference of Governmental Industrial Hygienists. TWA = Time-Weighted Average. A2 = Suspected human carcinogen. OSHA = US Occupational Safety and Health Administration. PEL = Permissible Exposure Limits. AIHA® = AIHA® Guideline Foundation. WEEL® = Workplace Environmental Exposure Limit.

Appropriate Engineering Controls

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

Individual Protection Measures

Eye/Face Protection

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

Skin Protection

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

Respiratory Protection

Wear a NIOSH approved air-purifying respirator with N100, R100, or P100 filter(s).

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Basic Physical and Chemical Properties

Appearance	Yellow - brown flakes.
Odour	Odourless
pH	6 - 8
Melting Point/Freezing Point	2200 °F (1204 °C) (melting); Not applicable (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)	2.5 - 2.8
Solubility	Insoluble in water
Partition Coefficient, n-Octanol/Water (Log Kow)	Not available
Auto-ignition Temperature	Not available
Decomposition Temperature	Not available
Other Information	
Physical State	Solid

SECTION 10. STABILITY AND REACTIVITY

Reactivity

Will undergo significant volume expansion when exposed to heat.

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

Peroxides, hydrogen fluoride, chlorine trifluoride, halogenated compounds (e.g. trichloroethylene).

Hazardous Decomposition Products

No decomposition if stored and applied as directed.

SECTION 11. TOXICOLOGICAL INFORMATION**Likely Routes of Exposure**

Eye contact; inhalation.

Acute Toxicity

Chemical Name	LC50	LD50 (oral)	LD50 (dermal)
Silica, quartz	Not available	500 mg/kg (rat)	Not available
vermiculite	Not available	Not available	Not available

Skin Corrosion/Irritation

No information was located.

Serious Eye Damage/Irritation

May cause mechanical irritation to eyes.

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

No information was located.

Ingestion

No information was located.

STOT (Specific Target Organ Toxicity) - Repeated Exposure

This product may contain trace amounts of crystalline silica (quartz). Long term exposure to respirable crystalline silica dust over the TLV may lead to the development of silicosis or other respiratory problems. Symptoms include cough, shortness of breath, wheezing, non-specific chest illness and reduced pulmonary function. May cause chronic bronchitis (inflammation of the airways leading to the lungs).

Respiratory and/or Skin Sensitization

No information was located.

Carcinogenicity

Chemical Name	IARC	ACGIH®	NTP	OSHA
Silica, quartz	Group 1	A2	Known carcinogen	Not Listed
vermiculite	Not Listed	Not Listed	Not Listed	Not Listed

This product may contain trace amounts of crystalline silica which the International Agency for Research on Cancer (IARC) has listed as causing cancer in humans.

Key to Abbreviations

IARC = International Agency for Research on Cancer. Group 1 = Carcinogenic to humans. ACGIH® = American Conference of Governmental Industrial Hygienists. A2 = Suspected human carcinogen. NTP = National Toxicology Program. OSHA = US Occupational Safety and Health Administration.

Reproductive Toxicity**Development of Offspring**

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No information was located.

Sexual Function and Fertility

No information was located.

Germ Cell Mutagenicity

No information was located.

Interactive Effects

Smoking and being exposed to free silica may cause a greater risk of developing certain pulmonary illnesses.

SECTION 12. ECOLOGICAL INFORMATION

No known significant effects or critical hazards.

Ecotoxicity

No information was located.

Acute Aquatic Toxicity

Chemical Name	LC50 Fish	EC50 Crustacea	ErC50 Aquatic Plants	ErC50 Algae
Silica, quartz	Not available	Not available	Not available	Not available
vermiculite	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.

SECTION 15. REGULATORY INFORMATION

Safety, Health and Environmental Regulations

USA

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

Exempt from TSCA Inventory requirements.

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: Chronic Health Hazard.

SARA Title III - Section 313: No chemicals are reportable under Section 313.

SECTION 16. OTHER INFORMATION

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

SDS Prepared By HSE Department

Phone No. 403-269-2800

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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.

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