

**SAFETY DATA SHEET**  
**ATTAPULGITE****Product Trade Name:**

Revision Date: 09-Apr-2015

Revision Number: 33

**1. Identification****1.1. Product Identifier**

**Product Trade Name:** ATTAPULGITE  
**Synonyms:** None  
**Chemical Family:** Mineral  
**Internal ID Code** HM000087

**1.2 Recommended use and restrictions on use**

**Application:** Suspending Agent  
**Uses Advised Against** No information available

**1.3 Manufacturer's Name and Contact Details**

**Manufacturer/Supplier** Halliburton Energy Services  
P.O. Box 1431  
Duncan, Oklahoma 73536-0431  
Emergency Telephone: (281) 575-5000

**Prepared By** Chemical Stewardship  
Telephone: 1-580-251-4335  
e-mail: fdunexchem@halliburton.com

**1.4. Emergency telephone number**

**Emergency Telephone Number** (281) 575-5000

**2. Hazard(s) Identification****2.1 Classification in accordance with paragraph (d) of §1910.1200**

Carcinogenicity	Category 1A - H350
Specific Target Organ Toxicity - (Repeated Exposure)	Category 1 - H372

**2.2. Label Elements****Hazard Pictograms**

**Signal Word** Danger

**Hazard Statements** H350 - May cause cancer  
H372 - Causes damage to organs through prolonged or repeated exposure

**Precautionary Statements**

<b>Prevention</b>	P201 - Obtain special instructions before use P202 - Do not handle until all safety precautions have been read and understood P260 - Do not breathe dust/fume/gas/mist/vapors/spray P264 - Wash face, hands and any exposed skin thoroughly after handling P270 - Do not eat, drink or smoke when using this product P280 - Wear protective gloves/protective clothing/eye protection/face protection
<b>Response</b>	P308 + P313 - IF exposed or concerned: Get medical advice/attention
<b>Storage</b>	P405 - Store locked up
<b>Disposal</b>	P501 - Dispose of contents/container in accordance with local/regional/national/international regulations

<b>Contains Substances</b>	<b>CAS Number</b>
Crystalline silica, quartz	14808-60-7

**2.3 Hazards not otherwise classified**

None known

**3. Composition/information on Ingredients**

Substances	CAS Number	PERCENT (w/w)	GHS Classification - US
Crystalline silica, quartz	14808-60-7	1 - 5%	Carc. 1A (H350) STOT RE 1 (H372)

The exact percentage (concentration) of the composition has been withheld as proprietary.

**4. First-Aid Measures****4.1. Description of first aid measures**

<b>Inhalation</b>	If inhaled, remove from area to fresh air. Get medical attention if respiratory irritation develops or if breathing becomes difficult.
<b>Eyes</b>	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.
<b>Skin</b>	Wash with soap and water.
<b>Ingestion</b>	Under normal conditions, first aid procedures are not required.

**4.2 Most important symptoms/effects, acute and delayed**

Breathing crystalline silica can cause lung disease, including silicosis and lung cancer. Crystalline silica has also been associated with scleroderma and kidney disease. Carcinogen. May cause damage to internal organs.

**4.3. Indication of any immediate medical attention and special treatment needed**

Notes to Physician Treat symptomatically.

**5. Fire-fighting measures****5.1. Extinguishing media****Suitable Extinguishing Media**

None - does not burn.

**Extinguishing media which must not be used for safety reasons**

None known.

**5.2 Specific hazards arising from the substance or mixture****Special Exposure Hazards**

None anticipated

**5.3 Special protective equipment and precautions for fire-fighters****Special Protective Equipment for Fire-Fighters**

Full protective clothing and approved self-contained breathing apparatus required for fire fighting personnel.

**6. Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures**

Use appropriate protective equipment. Avoid creating and breathing dust. Avoid contact with skin, eyes and clothing. Ensure adequate ventilation. Evacuate all persons from the area.  
See Section 8 for additional information

**6.2. Environmental precautions**

Prevent from entering sewers, waterways, or low areas.

**6.3. Methods and material for containment and cleaning up**

Collect using dustless method and hold for appropriate disposal. Consider possible toxic or fire hazards associated with contaminating substances and use appropriate methods for collection, storage and disposal.

**7. Handling and storage****7.1. Precautions for Safe Handling****Handling Precautions**

This product contains quartz, cristobalite, and/or tridymite which may become airborne without a visible cloud. Avoid breathing dust. Avoid creating dusty conditions. Use only with adequate ventilation to keep exposure below recommended exposure limits. Wear a NIOSH certified, European Standard En 149, or equivalent respirator when using this product. Material is slippery when wet.

**Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice.

**7.2. Conditions for safe storage, including any incompatibilities****Storage Information**

Store in a cool, dry location. Use good housekeeping in storage and work areas to prevent accumulation of dust. Close container when not in use. Product has a shelf life of 36 months.

**8. Exposure Controls/Personal Protection****8.1 Occupational Exposure Limits**

Substances	CAS Number	OSHA PEL-TWA	ACGIH TLV-TWA
Crystalline silica, quartz	14808-60-7	10 mg/m <sup>3</sup> %SiO <sub>2</sub> + 2	TWA: 0.025 mg/m <sup>3</sup>

**8.2 Appropriate engineering controls****Engineering Controls**

Use approved industrial ventilation and local exhaust as required to maintain exposures below applicable exposure limits.

**8.3 Individual protection measures, such as personal protective equipment**

<b>Respiratory Protection</b>	Wear a NIOSH certified, European Standard EN 149 (FFP2/FFP3), AS/NZS 1715, or equivalent respirator when using this product.
<b>Hand Protection</b>	Normal work gloves.
<b>Skin Protection</b>	Wear clothing appropriate for the work environment. Dusty clothing should be laundered before reuse. Use precautionary measures to avoid creating dust when removing or laundering clothing.
<b>Eye Protection</b>	Wear safety glasses or goggles to protect against exposure.
<b>Other Precautions</b>	None known.

## 9. Physical and Chemical Properties

### 9.1. Information on basic physical and chemical properties

<b>Physical State:</b> Solid	<b>Color:</b> Gray to red brown
<b>Odor:</b> Odorless	<b>Odor</b> No information available
	<b>Threshold:</b>
<b>Property</b>	<b>Values</b>
<b>Remarks/ - Method</b>	
<b>pH:</b>	No data available
<b>Freezing Point/Range</b>	No information available.
<b>Melting Point/Range</b>	No data available
<b>Boiling Point/Range</b>	No data available
<b>Flash Point</b>	No data available
<b>Flammability (solid, gas)</b>	No data available
upper flammability limit	No data available
lower flammability limit	No data available
<b>Evaporation rate</b>	No data available
<b>Vapor Pressure</b>	No data available
<b>Vapor Density</b>	No data available
<b>Specific Gravity</b>	2.58
<b>Water Solubility</b>	Insoluble in water
<b>Solubility in other solvents</b>	No data available
<b>Partition coefficient: n-octanol/water</b>	No data available
<b>Autoignition Temperature</b>	No data available
<b>Decomposition Temperature</b>	No data available
<b>Viscosity</b>	No data available
<b>Explosive Properties</b>	No information available
<b>Oxidizing Properties</b>	No information available

### 9.2. Other information

<b>VOC Content (%)</b>	No data available
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## 10. Stability and Reactivity

### 10.1. Reactivity

Not expected to be reactive.

### 10.2. Chemical Stability

Stable

### 10.3. Possibility of Hazardous Reactions

Will Not Occur

### 10.4. Conditions to Avoid

None anticipated

## **10.5. Incompatible Materials**

Hydrofluoric acid.

## **10.6. Hazardous Decomposition Products**

Amorphous silica may transform at elevated temperatures to tridymite (870 C) or cristobalite (1470 C).

## **11. Toxicological Information**

### **11.1 Information on likely routes of exposure**

**Principle Route of Exposure** Eye or skin contact, inhalation.

### **11.2 Symptoms related to the physical, chemical and toxicological characteristics**

#### **Acute Toxicity**

##### **Inhalation**

Inhaled crystalline silica in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (IARC, Group 1). There is sufficient evidence in experimental animals for the carcinogenicity of tridymite (IARC, Group 2A).

Breathing silica dust may cause irritation of the nose, throat, and respiratory passages. Breathing silica dust may not cause noticeable injury or illness even though permanent lung damage may be occurring. Inhalation of dust may also have serious chronic health effects (See "Chronic Effects/Carcinogenicity" subsection below).

##### **Eye Contact**

##### **Skin Contact**

##### **Ingestion**

May cause mechanical irritation to eye.

May cause mechanical skin irritation.

May cause abdominal pain, vomiting, nausea, and diarrhea.

#### **Chronic Effects/Carcinogenicity**

**Silicosis:** Excessive inhalation of respirable crystalline silica dust may cause a progressive, disabling, and sometimes-fatal lung disease called silicosis. Symptoms include cough, shortness of breath, wheezing, non-specific chest illness, and reduced pulmonary function. This disease is exacerbated by smoking. Individuals with silicosis are predisposed to develop tuberculosis.

**Cancer Status:** The International Agency for Research on Cancer (IARC) has determined that crystalline silica inhaled in the form of quartz or cristobalite from occupational sources can cause lung cancer in humans (Group 1 - carcinogenic to humans) and has determined that there is sufficient evidence in experimental animals for the carcinogenicity of tridymite (Group 2A - possible carcinogen to humans). Refer to [IARC Monograph 68, Silica, Some Silicates and Organic Fibres](#) (June 1997) in conjunction with the use of these minerals. The National Toxicology Program classifies respirable crystalline silica as "Known to be a human carcinogen". Refer to the 9th Report on Carcinogens (2000). The American Conference of Governmental Industrial Hygienists (ACGIH) classifies crystalline silica, quartz, as a suspected human carcinogen (A2).

There is some evidence that breathing respirable crystalline silica or the disease silicosis is associated with an increased incidence of significant disease endpoints such as scleroderma (an immune system disorder manifested by scarring of the lungs, skin, and other internal organs) and kidney disease.

### **11.3 Toxicity data**

**Toxicology data for the components**

<b>Substances</b>	<b>CAS Number</b>	<b>LD50 Oral</b>	<b>LD50 Dermal</b>	<b>LC50 Inhalation</b>
Crystalline silica, quartz	14808-60-7	>15,000 mg/kg (Human) 500 mg/kg (Rat)	No data available	No data available
<b>Substances</b>	<b>CAS Number</b>	<b>Skin corrosion/irritation</b>		
Crystalline silica, quartz	14808-60-7	Non-irritating to the skin		
<b>Substances</b>	<b>CAS Number</b>	<b>Eye damage/irritation</b>		
Crystalline silica, quartz	14808-60-7	Mechanical irritation of the eyes is possible.		
<b>Substances</b>	<b>CAS Number</b>	<b>Skin Sensitization</b>		
Crystalline silica, quartz	14808-60-7	No information available.		
<b>Substances</b>	<b>CAS Number</b>	<b>Respiratory Sensitization</b>		
Crystalline silica, quartz	14808-60-7	No information available		
<b>Substances</b>	<b>CAS Number</b>	<b>Mutagenic Effects</b>		
Crystalline silica, quartz	14808-60-7	Not regarded as mutagenic.		
<b>Substances</b>	<b>CAS Number</b>	<b>Carcinogenic Effects</b>		
Crystalline silica, quartz	14808-60-7	Contains crystalline silica which may cause silicosis, a delayed and progressive lung disease. The IARC and NTP have determined there is sufficient evidence in humans of the carcinogenicity of crystalline silica with repeated respiratory exposure. Based on available scientific evidence, this substance is a threshold carcinogen with a mode of action involving indirect genotoxicity secondary to lung injury.		
<b>Substances</b>	<b>CAS Number</b>	<b>Reproductive toxicity</b>		
Crystalline silica, quartz	14808-60-7	No information available		
<b>Substances</b>	<b>CAS Number</b>	<b>STOT - single exposure</b>		
Crystalline silica, quartz	14808-60-7	No significant toxicity observed in animal studies at concentration requiring classification.		
<b>Substances</b>	<b>CAS Number</b>	<b>STOT - repeated exposure</b>		
Crystalline silica, quartz	14808-60-7	Causes damage to organs through prolonged or repeated exposure if inhaled: (Lungs)		
<b>Substances</b>	<b>CAS Number</b>	<b>Aspiration hazard</b>		
Crystalline silica, quartz	14808-60-7	Not applicable		

**12. Ecological Information****12.1. Toxicity****Ecotoxicity Effects****Product Ecotoxicity Data**

No data available

**Substance Ecotoxicity Data**

<b>Substances</b>	<b>CAS Number</b>	<b>Toxicity to Algae</b>	<b>Toxicity to Fish</b>	<b>Toxicity to Microorganisms</b>	<b>Toxicity to Invertebrates</b>
Crystalline silica, quartz	14808-60-7	No information available	LL0 (96h) 10,000 mg/L (Danio rerio) (similar substance)	No information available	LL50 (24h) > 10,000 mg/L (Daphnia magna) (similar substance)

**12.2. Persistence and degradability**

<b>Substances</b>	<b>CAS Number</b>	<b>Persistence and Degradability</b>
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Crystalline silica, quartz	14808-60-7	The methods for determining biodegradability are not applicable to inorganic substances.
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### **12.3. Bioaccumulative potential**

Substances	CAS Number	Log Pow
Crystalline silica, quartz	14808-60-7	No information available

### **12.4. Mobility in soil**

Substances	Mobility
Crystalline silica, quartz	No information available

### **12.5 Other adverse effects**

No information available

## **13. Disposal Considerations**

### **13.1. Waste treatment methods**

<b>Disposal Method</b>	Bury in a licensed landfill according to federal, state, and local regulations.
<b>Contaminated Packaging</b>	Follow all applicable national or local regulations.

## **14. Transport Information**

### **US DOT**

<b>UN Number:</b>	Not restricted
<b>UN Proper Shipping Name:</b>	Not restricted
<b>Transport Hazard Class(es):</b>	Not applicable
<b>Packing Group:</b>	Not applicable
<b>Environmental Hazards:</b>	Not applicable

### **US DOT Bulk**

<b>DOT (Bulk)</b>	Not applicable
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### **Canadian TDG**

<b>UN Number:</b>	Not restricted
<b>UN Proper Shipping Name:</b>	Not restricted
<b>Transport Hazard Class(es):</b>	Not applicable
<b>Packing Group:</b>	Not applicable
<b>Environmental Hazards:</b>	Not applicable

### **IMDG/IMO**

<b>UN Number:</b>	Not restricted
<b>UN Proper Shipping Name:</b>	Not restricted
<b>Transport Hazard Class(es):</b>	Not applicable
<b>Packing Group:</b>	Not applicable
<b>Environmental Hazards:</b>	Not applicable

### **IATA/ICAO**

<b>UN Number:</b>	Not restricted
<b>UN Proper Shipping Name:</b>	Not restricted
<b>Transport Hazard Class(es):</b>	Not applicable
<b>Packing Group:</b>	Not applicable
<b>Environmental Hazards:</b>	Not applicable

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:** Not applicable  
**Special Precautions for User:** None

## 15. Regulatory Information

### US Regulations

<b>US TSCA Inventory</b>	All components listed on inventory or are exempt.
<b>EPA SARA Title III Extremely Hazardous Substances</b>	Not applicable
<b>EPA SARA (311,312) Hazard Class</b>	Chronic Health Hazard
<b>EPA SARA (313) Chemicals</b>	This product does not contain a toxic chemical for routine annual "Toxic Chemical Release Reporting" under Section 313 (40 CFR 372).
<b>EPA CERCLA/Superfund Reportable Spill Quantity</b>	Not applicable.
<b>EPA RCRA Hazardous Waste Classification</b>	If product becomes a waste, it does NOT meet the criteria of a hazardous waste as defined by the US EPA.
<b>California Proposition 65</b>	The California Proposition 65 regulations apply to this product.
<b>MA Right-to-Know Law</b>	One or more components listed.
<b>NJ Right-to-Know Law</b>	One or more components listed.
<b>PA Right-to-Know Law</b>	One or more components listed.
<b>Canadian Regulations</b>	
<b>Canadian DSL Inventory</b>	All components listed on inventory or are exempt.

## 16. Other information

### Preparation Information

**Prepared By** Chemical Stewardship  
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e-mail: fdunexchem@halliburton.com

**Revision Date:** 09-Apr-2015

**Reason for Revision** Update to Format SECTION: 2

### Additional information

For additional information on the use of this product, contact your local Halliburton representative.

For questions about the Safety Data Sheet for this or other Halliburton products, contact Chemical Stewardship at 1-580-251-4335.

**Key or legend to abbreviations and acronyms**

bw – body weight  
CAS – Chemical Abstracts Service  
EC50 – Effective Concentration 50%  
ErC50 – Effective Concentration growth rate 50%  
LC50 – Lethal Concentration 50%  
LD50 – Lethal Dose 50%  
LL50 – Lethal Loading 50%  
mg/kg – milligram/kilogram  
mg/L – milligram/liter  
NIOSH – National Institute for Occupational Safety and Health  
NTP – National Toxicology Program  
OEL – Occupational Exposure Limit  
PEL – Permissible Exposure Limit  
ppm – parts per million  
STEL – Short Term Exposure Limit  
TWA – Time-Weighted Average  
UN – United Nations  
h - hour  
mg/m<sup>3</sup> - milligram/cubic meter  
mm - millimeter  
mmHg - millimeter mercury  
w/w - weight/weight  
d - day

**Key literature references and sources for data**

[www.ChemADVISOR.com/](http://www.ChemADVISOR.com/)

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**End of Safety Data Sheet**