

SAFETY DATA SHEET

Product Trade Name: GELTONE® V

Revision Date: 14-Aug-2017

Revision Number: 32

1. Identification

1.1. Product Identifier

Product Trade Name: GELTONE® V
Synonyms None
Chemical Family: Blend
Internal ID Code HM003657

1.2 Recommended use and restrictions on use

Application: Viscosifier
Uses advised against No information available

1.3 Manufacturer's Name and Contact Details

Manufacturer/Supplier

Baroid Fluid Services
Product Service Line of Halliburton Energy Services, Inc.
P.O. Box 1675
Houston, TX 77251
Telephone: (281) 871-4000

Halliburton Energy Services, Inc.
645 - 7th Ave SW Suite 1800
Calgary, AB
T2P 4G8
Canada

Prepared By Chemical Stewardship
Telephone: 1-281-871-6107
e-mail: fdunexchem@halliburton.com

1.4. Emergency telephone number:

Emergency Telephone Number 1-866-519-4752 or 1-760-476-3962
Global Incident Response Access Code: 334305
Contract Number: 14012

2. Hazards 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
Acute Aquatic Toxicity	Category 2 - H401

2.2. Label Elements

Hazard Pictograms



Signal Word: Danger

Hazard Statements
 H350 - May cause cancer by inhalation
 H372 - Causes damage to organs through prolonged or repeated exposure if inhaled
 H401 - Toxic to aquatic life

Precautionary Statements

Prevention
 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
 P273 - Avoid release to the environment
 P280 - Wear protective gloves/protective clothing/eye protection/face protection

Response
 P308 + P313 - IF exposed or concerned: Get medical advice/attention
 P314 - Get medical attention/advice if you feel unwell

Storage
 P405 - Store locked up

Disposal
 P501 - Dispose of contents/container in accordance with local/regional/national/international regulations

2.3 Hazards not otherwise classified

This product contains Wyoming bentonite or other sorptive clays. Crystalline silica forms found in this particular clay are limited to quartz. Extreme temperatures that can generate cristobalite or tridymite are not expected to occur under realistic conditions. In addition, all quartz found in sorptive clays are considered "occluded", i.e., strongly coated with an amorphous silica surface. Occluded quartz has been experimentally-determined to be relatively non-toxic compared to unoccluded quartz. A lack of health effects found in several studies examining occupational exposure to sorptive clays also suggest that chronic inhalation of sorptive clays is not expected to result in silicosis or cancer. In light of these findings OSHA has recently exempted Wyoming bentonite and other sorptive clays from the crystalline silica PEL in §1910.1053(a)(1)(iii).

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)
Bis(hydrogenated tallow alkyl) methylamines	61788-63-4	0.1 - 1%	Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Aquatic Acute 1 (H400)

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

4. First Aid Measures

4.1. Description of first aid measures

Inhalation If inhaled, remove from area to fresh air. Get medical attention if respiratory irritation develops or if breathing becomes difficult.

Eyes In case of contact, immediately flush eyes with plenty of water for at least 15

	minutes and get medical attention if irritation persists.
Skin	Wash with soap and water. Get medical attention if irritation persists.
Ingestion	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.

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

Notes to Physician	Treat symptomatically.
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5. Fire-fighting measures

5.1. Extinguishing media**Suitable Extinguishing Media**

All standard fire fighting media

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 in a fire**

Not applicable

5.3 Special protective equipment and precautions for fire-fighters**Special protective equipment for firefighters**

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. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing.

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. Store in a well ventilated area. Use good housekeeping in storage and work areas to

prevent accumulation of dust. Close container when not in use. Keep container closed when not in use. Store locked up. Do not reuse empty container. Product has a shelf life of 24 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	TWA: 50 µg/m ³	TWA: 0.025 mg/m ³
Bis(hydrogenated tallow alkyl) methylamines	61788-63-4	Not applicable	Not applicable

Exposures to crystalline silica that result from bentonite or other sorptive clays are exempt from the PEL in §1910.1053. The PEL in §1910.1000 Table Z-3 (i.e., the formula that is approximately equivalent to 100 µg/m³) applies to occupational exposures to respirable crystalline silica from sorptive clays.

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

Personal Protective Equipment If engineering controls and work practices cannot prevent excessive exposures, the selection and proper use of personal protective equipment should be determined by an industrial hygienist or other qualified professional based on the specific application of this product.

Respiratory Protection Wear a NIOSH certified, European Standard EN 149 (FFP2/FFP3), AS/NZS 1715, or equivalent respirator when using this product.

Hand Protection Normal work gloves.

Skin Protection 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.

Eye Protection Wear safety glasses or goggles to protect against exposure.

Other Precautions None known.

9. Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Physical State: Powder **Color** Tan
Odor: Mild **Odor** No information available
Threshold:

Property	Values
Remarks/ - Method	
pH:	No data available
Freezing Point / Range	No data available
Melting Point / Range	No data available
Boiling Point / Range	No data available
Flash Point	No data available
Flammability (solid, gas)	No data available
Upper flammability limit	No data available
Lower flammability limit	No data available
Evaporation rate	No data available
Vapor Pressure	No data available
Vapor Density	No data available
Specific Gravity	1.6
Water Solubility	Insoluble
Solubility in other solvents	No data available
Partition coefficient: n-octanol/water	No data available

Autoignition Temperature	No data available
Decomposition Temperature	No data available
Viscosity	No data available
Explosive Properties	No information available
Oxidizing Properties	No information available

9.2. Other information

VOC Content (%)	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

May cause mechanical irritation to eye.

Skin Contact

None known.

Ingestion

None known.

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.

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11.3 Toxicity data

Toxicology data for the components

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
Crystalline silica, quartz	14808-60-7	> 15000 mg/kg (human)	No data available	No data available
Bis(hydrogenated tallow alkyl) methylamines	61788-63-4	> 2000 mg/kg (Rat) > 5000 mg/kg (Rat)	> 2000 mg/kg (Rabbit) (similar substance)	> 180 mg/L (Rat) 1h (similar substance)

Substances	CAS Number	Skin corrosion/irritation
Crystalline silica, quartz	14808-60-7	Non-irritating to the skin
Bis(hydrogenated tallow alkyl) methylamines	61788-63-4	Causes moderate skin irritation. (Rabbit)

Substances	CAS Number	Serious eye damage/irritation
Crystalline silica, quartz	14808-60-7	Non-irritating to the eye
Bis(hydrogenated tallow alkyl) methylamines	61788-63-4	Causes moderate eye irritation (Rabbit)

Substances	CAS Number	Skin Sensitization
Crystalline silica, quartz	14808-60-7	No information available.
Bis(hydrogenated tallow alkyl) methylamines	61788-63-4	Did not cause sensitization on laboratory animals (guinea pig)

Substances	CAS Number	Respiratory Sensitization
Crystalline silica, quartz	14808-60-7	No information available
Bis(hydrogenated tallow alkyl) methylamines	61788-63-4	No information available

Substances	CAS Number	Mutagenic Effects
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Crystalline silica, quartz	14808-60-7	Not regarded as mutagenic.
Bis(hydrogenated tallow alkyl) methylamines	61788-63-4	In vitro tests did not show mutagenic effects. In vivo tests did not show mutagenic effects.

Substances	CAS Number	Carcinogenic Effects
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.
Bis(hydrogenated tallow alkyl) methylamines	61788-63-4	No information available

Substances	CAS Number	Reproductive toxicity
Crystalline silica, quartz	14808-60-7	No information available
Bis(hydrogenated tallow alkyl) methylamines	61788-63-4	Animal testing did not show any effects on fertility. Did not show teratogenic effects in animal experiments. (similar substances)

Substances	CAS Number	STOT - single exposure
Crystalline silica, quartz	14808-60-7	No significant toxicity observed in animal studies at concentration requiring classification.
Bis(hydrogenated tallow alkyl) methylamines	61788-63-4	No information available

Substances	CAS Number	STOT - repeated exposure
Crystalline silica, quartz	14808-60-7	Causes damage to organs through prolonged or repeated exposure if inhaled: (Lungs)
Bis(hydrogenated tallow alkyl) methylamines	61788-63-4	No significant toxicity observed in animal studies at concentration requiring classification. (similar substances)

Substances	CAS Number	Aspiration hazard
Crystalline silica, quartz	14808-60-7	Not applicable
Bis(hydrogenated tallow alkyl) methylamines	61788-63-4	Not applicable

12. Ecological Information

12.1. Toxicity

Substance Ecotoxicity Data

Substances	CAS Number	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Toxicity to Invertebrates
Crystalline silica, quartz	14808-60-7	EC50 (72 h) =440 mg/L (Selenastrum capricornutum)(similar substance)	LL0 (96 h) =10000 mg/L (Danio rerio)(similar substance)	No information available	LL50 (24 h) >10000 mg/L (Daphnia magna)(similar substance)
Bis(hydrogenated tallow alkyl) methylamines	61788-63-4	ErC50 (72h) 0.12 mg/L (Selenastrum capricornutum) EC50 (72h) 0.05 mg/L (Pseudokirchneriella subcapitata)	LC50 (96h) > 1000 mg/L (Brachydanio rerio)	No information available	EC50 (48h) 50 mg/L (Daphnia magna) EC50 (48h) 35.2 mg/L (Daphnia magna) EC50 (48h) 10 mg/L (Daphnia magna)

12.2. Persistence and degradability

Substances	CAS Number	Persistence and Degradability
Crystalline silica, quartz	14808-60-7	The methods for determining biodegradability are not applicable to inorganic substances.
Bis(hydrogenated tallow alkyl) methylamines	61788-63-4	Readily biodegradable (100% @ 28d)

12.3. Bioaccumulative potential

Substances	CAS Number	Log Pow
Crystalline silica, quartz	14808-60-7	No information available
Bis(hydrogenated tallow alkyl) methylamines	61788-63-4	No information available

12.4. Mobility in soil

Substances	CAS Number	Mobility
Crystalline silica, quartz	14808-60-7	No information available
Bis(hydrogenated tallow alkyl) methylamines	61788-63-4	No information available

12.5 Other adverse effects

No information available

13. Disposal Considerations**13.1. Waste treatment methods**

Disposal methods Bury in a licensed landfill according to federal, state, and local regulations.
Contaminated Packaging Follow all applicable national or local regulations.

14. Transport Information**US DOT**

UN Number Not restricted
UN proper shipping name: Not restricted
Transport Hazard Class(es): Not applicable
Packing Group: Not applicable
Environmental Hazards: Not applicable

Canadian TDG

UN Number Not restricted
UN proper shipping name: Not restricted
Transport Hazard Class(es): Not applicable
Packing Group: Not applicable
Environmental Hazards: Not applicable

IMDG/IMO

UN Number Not restricted
UN proper shipping name: Not restricted
Transport Hazard Class(es): Not applicable
Packing Group: Not applicable
Environmental Hazards: Not applicable

IATA/ICAO

UN Number Not restricted
UN proper shipping name: Not restricted
Transport Hazard Class(es): Not applicable
Packing Group: Not applicable
Environmental Hazards: 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**

US TSCA Inventory All components listed on inventory or are exempt.

TSCA Significant New Use Rules - S5A2

Substances	CAS Number	TSCA Significant New Use Rules - S5A2
Crystalline silica, quartz	14808-60-7	Not applicable

Bis(hydrogenated tallow alkyl) methylamines	61788-63-4	Not applicable
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EPA SARA Title III Extremely Hazardous Substances

Substances	CAS Number	EPA SARA Title III Extremely Hazardous Substances
Crystalline silica, quartz	14808-60-7	Not applicable
Bis(hydrogenated tallow alkyl) methylamines	61788-63-4	Not applicable

EPA SARA (311,312) Hazard Class

Chronic Health Hazard

EPA SARA (313) Chemicals

Substances	CAS Number	Toxic Release Inventory (TRI) - Group I	Toxic Release Inventory (TRI) - Group II
Crystalline silica, quartz	14808-60-7	Not applicable	Not applicable
Bis(hydrogenated tallow alkyl) methylamines	61788-63-4	Not applicable	Not applicable

EPA CERCLA/Superfund Reportable Spill Quantity

Substances	CAS Number	CERCLA RQ
Crystalline silica, quartz	14808-60-7	Not applicable
Bis(hydrogenated tallow alkyl) methylamines	61788-63-4	Not applicable

EPA RCRA Hazardous Waste Classification

If product becomes a waste, it does NOT meet the criteria of a hazardous waste as defined by the US EPA.

California Proposition 65

Substances	CAS Number	California Proposition 65
Crystalline silica, quartz	14808-60-7	carcinogen
Bis(hydrogenated tallow alkyl) methylamines	61788-63-4	Not applicable

U.S. State Right-to-Know Regulations

Substances	CAS Number	MA Right-to-Know Law	NJ Right-to-Know Law	PA Right-to-Know Law
Crystalline silica, quartz	14808-60-7	Carcinogen Extraordinarily hazardous	1660	Present
Bis(hydrogenated tallow alkyl) methylamines	61788-63-4	Not applicable	Not applicable	Not applicable

NFPA Ratings:

Health 1, Flammability 0, Reactivity 0

HMIS Ratings:

Health 1*, Flammability 0, Reactivity 0, PPE: B

Canadian Regulations

Canadian Domestic Substances All components listed on inventory or are exempt.
List (DSL)

16. Other information**Preparation Information****Prepared By**

Chemical Stewardship
 Telephone: 1-281-871-6107
 e-mail: fdunexchem@halliburton.com

Revision Date:

14-Aug-2017

Reason for Revision

SDS sections updated:

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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 used in the safety data sheet

bw – body weight

CAS – Chemical Abstracts Service

d - day

EC50 – Effective Concentration 50%

ErC50 – Effective Concentration growth rate 50%

h - hour

LC50 – Lethal Concentration 50%

LD50 – Lethal Dose 50%

LL50 – Lethal Loading 50%

mg/kg – milligram/kilogram

mg/L – milligram/liter

mg/m³ - milligram/cubic meter

mm - millimeter

mmHg - millimeter mercury

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

w/w - weight/weight

Key literature references and sources for data

www.ChemADVISOR.com/

Disclaimer Statement

This information is furnished without warranty, expressed or implied, as to accuracy or completeness. The information is obtained from various sources including the manufacturer and other third party sources. The information may not be valid under all conditions nor if this material is used in combination with other materials or in any process. Final determination of suitability of any material is the sole responsibility of the user.

End of Safety Data Sheet