MATERIAL SAFETY DATA SHEET

Product Trade Name: GELTONE® V
Revision Date: 13-Jan-2014

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Statement of Hazardous Nature
Hazardous according to the criteria of NOHSC, Non-Dangerous Goods according to the criteria of ADG.

Manufacturer/Supplier
Halliburton Australia Pty. Ltd.
15 Marriott Road
Jandakot
WA 6164
Australia
ACN Number: 009 000 775
Telephone Number: 61 (08) 9455 8300
Fax Number: 61 (08) 9455 5300

Product Emergency Telephone
Australia: 08-64244950
Papua New Guinea: 05 1 281 575 5000
New Zealand: 06-7559274

Fire, Police & Ambulance - Emergency Telephone
Australia: 000
Papua New Guinea: 000
New Zealand: 111

Identification of Substances or Preparation

Product Trade Name: GELTONE® V
Synonyms: None
Chemical Family: Blend
UN Number: None
Dangerous Goods Class: None
Subsidiary Risk: None
Hazchem Code: None Allocated
Poisons Schedule: None Allocated
Application: Viscosifier

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

2. HAZARDS IDENTIFICATION

Statement of Hazardous Nature
Hazardous according to the criteria of NOHSC, Non-Dangerous Goods according to the criteria of ADG.
Hazard Overview

Breathing crystalline silica can cause lung disease, including silicosis and lung cancer. Crystalline silica has also been associated with scleroderma and kidney disease.

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 exposures below recommended exposure limits. Wear a NIOSH certified, European Standard EN 149, or equivalent respirator when using this product. Review the Material Safety Data Sheet (MSDS) for this product, which has been provided to your employer.

Classification

Crystalline silica is not classified as a carcinogen in EU Council Directives 67/548/EEC and 88/379/EEC.

Risk Phrases

None R49 May cause cancer by inhalation.
R36/38 Irritating to eyes and skin.
R48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.

Safety Phrases

None
S22 Do not breathe dust.

HSNO Classification

Not Determined

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Substances</th>
<th>CAS Number</th>
<th>PERCENT (w/w)</th>
<th>Australia NOHSC</th>
<th>New Zealand WES</th>
<th>ACGIH TLV-TWA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isopropanol</td>
<td>67-63-0</td>
<td>1 - 5%</td>
<td>TWA: 400 ppm</td>
<td>STEL: 500 ppm</td>
<td>TWA: 200 ppm STEL: 400 ppm</td>
</tr>
<tr>
<td>Crystalline silica, quartz</td>
<td>14808-60-7</td>
<td>1 - 5%</td>
<td>TWA: 0.1 mg/m³</td>
<td>TWA: 0.2 mg/m³</td>
<td>TWA: 0.025 mg/m³</td>
</tr>
<tr>
<td>Crystalline silica, cristobalite</td>
<td>14464-46-1</td>
<td>0 - 1%</td>
<td>TWA: 0.1 mg/m³</td>
<td>TWA: 0.1 mg/m³</td>
<td>TWA: 0.025 mg/m³</td>
</tr>
<tr>
<td>Crystalline silica, tridymite</td>
<td>15468-32-3</td>
<td>0 - 1%</td>
<td>TWA: 0.1 mg/m³</td>
<td>TWA: 0.1 mg/m³</td>
<td>0.05 mg/m³</td>
</tr>
</tbody>
</table>

Non-Hazardous Substance to Total of 100%

4. FIRST AID MEASURES

Inhalation

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

Skin

Wash with soap and water. Get medical attention if irritation persists.

Eyes

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.

Ingestion

Under normal conditions, first aid procedures are not required.

Notes to Physician

Not Applicable

5. FIRE FIGHTING MEASURES
Suitable Extinguishing Media
All standard fire fighting media

Extinguishing media which must not be used for safety reasons
None known.

Special Exposure Hazards Not applicable.
Special Protective Equipment for Fire-Fighters Not applicable.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautionary Measures Use appropriate protective equipment. Avoid creating and breathing dust.

Environmental Precautionary Measures None known.

Procedure for Cleaning / Absorption 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

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.

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. Do not reuse empty container. Product has a shelf life of 24 months.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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

Respiratory Protection Wear a NIOSH certified, European Standard EN 149 (FFP2/FFP3), 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
Physical State: Powder

Color: Tan
Odor: Mild
pH: Not Determined
Specific Gravity @ 20 C (Water=1): 1.6
Density @ 20 C (kg/l): Not Determined
Bulk Density @ 20 C (kg/M3): Not Determined
Boiling Point/Range (C): Not Determined
Freezing Point/Range (C): Not Determined
Pour Point/Range (C): Not Determined
Flash Point/Range (C): Not Determined
Flash Point Method: Not Determined
Autoignition Temperature (C): Not Determined
Flammability Limits in Air - Lower (g/m^3): Not Determined
Flammability Limits in Air - Lower (%): Not Determined
Flammability Limits in Air - Upper (g/m^3): Not Determined
Flammability Limits in Air - Upper (%): Not Determined
Vapor Pressure @ 20 C (mmHg): Not Determined
Vapor Density (Air=1): Not Determined
Percent Volatiles: Not Determined
Evaporation Rate (Butyl Acetate=1): Not Determined
Solubility in Water (g/100ml): Insoluble
Solubility in Solvents (g/100ml): Miscible in hydrocarbons
VOCs (g/l): Not Determined
Viscosity, Dynamic @ 20 C (centipoise): Not Determined
Viscosity, Kinematic @ 20 C (centistokes): Not Determined
Partition Coefficient/n-Octanol/Water: Not Determined
Molecular Weight (g/mole): Not Determined
Decomposition Temperature (C): Not Determined

10. STABILITY AND REACTIVITY

Stability Data: Stable
Hazardous Polymerization: Will Not Occur
Conditions to Avoid None anticipated
Incompatibility (Materials to Avoid) Hydrofluoric acid.
Hazardous Decomposition Products Amorphous silica may transform at elevated temperatures to tridymite (870 C) or cristobalite (1470 C).
Additional Guidelines Not Applicable

11. TOXICOLOGICAL INFORMATION

Principle Route of Exposure Eye or skin contact, inhalation.

Symptoms related to exposure
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 mild eye irritation.

Skin Contact
May cause mild skin irritation.

Ingestion
Irritation of the mouth, throat, and stomach.

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.

<table>
<thead>
<tr>
<th>Toxicology data for the components</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Substances</th>
<th>CAS Number</th>
<th>LD50 Oral (mg/kg)</th>
<th>LD50 Dermal (mg/kg)</th>
<th>LC50 Inhalation (mg/L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isopropanol</td>
<td>67-63-0</td>
<td>4396 (Rat)</td>
<td>12800 (Rat)</td>
<td>72.6 (Rat) 4h</td>
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<tr>
<td>Crystalline silica, quartz</td>
<td>14808-60-7</td>
<td>500 (Mouse)</td>
<td>No data available</td>
<td>No data available</td>
</tr>
<tr>
<td>Crystalline silica, cristobalite</td>
<td>14464-46-1</td>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
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<td>Crystalline silica, tridymite</td>
<td>15468-32-3</td>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
</tr>
</tbody>
</table>

12. ECOLOGICAL INFORMATION

Ecotoxicological Information

Ecotoxicity Product

- Acute Fish Toxicity: Not determined
- Acute Crustaceans Toxicity: Not determined
- Acute Algae Toxicity: Not determined

Ecotoxicity Substance

<table>
<thead>
<tr>
<th>Substances</th>
<th>CAS Number</th>
<th>Toxicity to Algae</th>
<th>Toxicity to Fish</th>
<th>Toxicity to Microorganisms</th>
<th>Daphnia Magna (Water Flea)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Substance</td>
<td>EC50:</td>
<td>LC50:</td>
<td>EC50:</td>
<td>EC50:</td>
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</tr>
<tr>
<td>---------------------------------</td>
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<tr>
<td>Isopropanol</td>
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<td>9640</td>
<td>&gt; 1000</td>
<td>-</td>
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<tr>
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<td>&gt; 1000</td>
<td>&gt; 1000</td>
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<tr>
<td>Crystalline silica, cristobalite</td>
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<td>Crystalline silica, tridymite</td>
<td>&gt; 1000</td>
<td>&gt; 1000</td>
<td>&gt; 1000</td>
<td>&gt; 1000</td>
<td></td>
</tr>
</tbody>
</table>

12.2 Persistence and degradability
No information available

12.3 Bioaccumulative potential
No information available

12.4 Mobility in soil
No information available

12.5 Results of PBT and vPvB assessment
No information available.

12.6 Other adverse effects

13. DISPOSAL CONSIDERATIONS

Disposal Method
Bury in a licensed landfill according to federal, state, and local regulations.

Contaminated Packaging
Follow all applicable national or local regulations.

14. TRANSPORT INFORMATION

Land Transportation

ADR
Not restricted

Air Transportation

ICAO/IATA
Not restricted

Sea Transportation

IMDG
Not restricted

Other Transportation Information

Labels:
None

15. REGULATORY INFORMATION

Chemical Inventories

Australian AICS Inventory
All components listed on inventory or are exempt.

New Zealand Inventory of Chemicals
All components listed on inventory or are exempt.

US TSCA Inventory
All components listed on inventory or are exempt.
EINECS Inventory
This product, and all its components, complies with EINECS

Classification
Crystalline silica is not classified as a carcinogen in EU Council Directives 67/548/EEC and 88/379/EEC.

Risk Phrases
None R49 May cause cancer by inhalation.
R36/38 Irritating to eyes and skin.
R48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.

Safety Phrases
None S22 Do not breathe dust.

16. OTHER INFORMATION

The following sections have been revised since the last issue of this SDS
Not applicable

Contact

Australian Poisons Information Centre
24 Hour Service: - 13 11 26
Police or Fire Brigade: - 000 (exchange): - 1100

New Zealand National Poisons Centre
0800 764 766

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 Compliance at 1-580-251-4335.

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***END OF MSDS***