SAFETY DATA SHEET

WellLife 930

Revision Date: 17-Apr-2014  Revision Number: 6

1. Product and Company Identification

Product Name
Product Trade Name: WellLife 930

Other Names
Synonyms: None
Product Code: HM007156

Recommended Use
Recommended Use: Elastomeric Additive
Uses Advised Against: No information available

Company Name, Address and Contact Details
Manufacturer/Supplier: Halliburton New Zealand
1 Paraite Rd,
Bell Block, New Plymouth
New Zealand Registration No.: 824207

E-Mail address: fdunexchem@halliburton.com
Emergency Telephone Number: +64-6-7559274
New Zealand National Poisons Centre: 0800 764 766 (24 hours)

2. Hazard(s) Identification

Statement of Hazardous Nature
Classified as hazardous according to criteria in the Hazardous Substances (Minimum Degrees of Hazard) Regulation 2001;
Not Classified as dangerous good according to NZS 5433:2012, UN, IMDG or IATA

Classification
6.7A Known or presumed human carcinogens
6.9B Harmful to human target organs or systems

Hazard and Precautionary Statements

Hazard Pictograms

Signal Word
Danger

Hazard Statements
H350 - May cause cancer by inhalation
H373 - May cause damage to organs through prolonged or repeated exposure if inhaled

Precautionary Statements
Prevention

P103 - Read label before use
P104 - Read Safety Data Sheet before use
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
P281 - Use personal protective equipment as required

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 to an approved landfill

Contains

<table>
<thead>
<tr>
<th>Substances</th>
<th>CAS Number</th>
<th>Substance HSNO Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barium sulfate</td>
<td>7727-43-7</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Crystalline silica, quartz</td>
<td>14808-60-7</td>
<td>6.7A</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6.9A</td>
</tr>
</tbody>
</table>

2.3 Other Hazards

None known

3. Composition and Information on Ingredients

<table>
<thead>
<tr>
<th>Substances</th>
<th>CAS Number</th>
<th>PERCENT (w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barium sulfate</td>
<td>7727-43-7</td>
<td>60 - 100%</td>
</tr>
<tr>
<td>Crystalline silica, quartz</td>
<td>14808-60-7</td>
<td>1 - 5%</td>
</tr>
</tbody>
</table>

4. First-Aid Measures

Requirements for First Aid or Medical Care

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
Do not induce vomiting. Slowly dilute with 1-2 glasses of water or milk and seek medical attention. Never give anything by mouth to an unconscious person.

Workplace Facilities Required

None

Relation to Health Effect

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

Medical Attention and Special Treatment

Notes to Physician
Treat symptomatically

5. Fire-fighting measures

Type of Hazard
Flammability Hazard
Non-flammable

5.1 Extinguishing media
Suitable Extinguishing Media
All standard fire fighting media
Extinguishing media which must not be used for safety reasons
None known.

HAZCHEM Code
Hazchem Code: None Allocated

Special Protective Equipment and Precautions for Fire Fighters
Not applicable.

Special Protective Equipment for Fire-Fighters
Not applicable.

Special Exposure Hazards
Organic dust in the presence of an ignition source can be explosive in high concentrations. Good housekeeping practices are required to minimize this potential.

6. Spillage, Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures
Use appropriate protective equipment. Avoid creating and breathing dust.
See Section 8 for additional information

6.2 Environmental precautions
None known.

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.

6.4 Reference to other sections
See Section 8 for additional information.

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.

Handling Practices
Hygiene Measures
Handle in accordance with good industrial hygiene and safety practice

Approved Handlers
If more than 10 kg (Class 6) is present, then an approved handler must be present when the substance is being handled and when not in use, the substance must be locked away.

7.2 Conditions for safe storage, including any incompatibilities
Do not reuse empty container. 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. Store in a well ventilated area. Store locked up. Product has a shelf life of 24 months.

Store Site Requirements
No special controls required

Packaging
No special packaging required

8. Exposure Controls and Personal Protection

Workplace Exposure Standards
Exposure Limits

<table>
<thead>
<tr>
<th>Substances</th>
<th>CAS Number</th>
<th>New Zealand WES</th>
<th>ACGIH TLV-TWA</th>
</tr>
</thead>
</table>

9. Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Granules</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No information available</td>
</tr>
<tr>
<td>Color</td>
<td>Light brown</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Freezing Point/Range</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting Point/Range</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling Point/Range</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash Point</td>
<td>No data available</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>No data available</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>2</td>
</tr>
<tr>
<td>Water Solubility</td>
<td>Insoluble in water</td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td>No data available</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>No data available</td>
</tr>
<tr>
<td>Autoignition Temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive Properties</td>
<td>No information available</td>
</tr>
<tr>
<td>Oxidizing Properties</td>
<td>No information available</td>
</tr>
</tbody>
</table>

9.2 Other information

| VOC Content (%)                       | No data available          |

10. Stability and Reactivity

10.2 Chemical Stability

Stable

10.4 Conditions to Avoid

None anticipated

10.5 Incompatible Materials

Strong acids. Strong oxidizers.

10.6 Hazardous Decomposition Products

Amorphous silica may transform at elevated temperatures to tridymite (870 C) or cristobalite (1470 C). Oxides of sulfur. Carbon monoxide and carbon dioxide.

Hazardous Reactions
11. Toxicological Information

Health Effect from Likely Routes of 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

Prolonged or repeated contact may cause skin irritation.

Ingestion

Prolonged inhalation of fine barium sulfate dusts form harmless nodular granules in lung, an affliction called baritosis. Baritosis produces no symptoms of bronchitis or emphysema, and lung functioning is not affected although dyspnea, upon exertion, may occur. The nodulation disappears if exposure is stopped. 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.

Toxicity Data

Toxicology data for the components

<table>
<thead>
<tr>
<th>Substances</th>
<th>CAS Number</th>
<th>LD50 Oral</th>
<th>LD50 Dermal</th>
<th>LC50 Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barium sulfate</td>
<td>7727-43-7</td>
<td>&gt; 307,000 mg/kg</td>
<td>&gt; 2,000 mg/kg</td>
<td>No data available</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&gt; 2000mg/kg (similar substance -</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>barium dichloride)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crystalline silica, quartz</td>
<td>14808-60-7</td>
<td>&gt; 5000 mg/kg (Rat)</td>
<td>No data available</td>
<td>No data available</td>
</tr>
</tbody>
</table>

12. Ecological Information

12.1 Toxicity
Ecotoxicity Effects

Product Ecotoxicity Data
No data available

Substance Ecotoxicity Data

<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>Toxicity to Invertebrates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barium sulfate</td>
<td>7727-43-7</td>
<td>EC50(72h): (growth rate) &gt; 61.1 mg/L (Pseudokirchnerella subcapitata)</td>
<td>TLM96: 7500 ppm (Oncorhynchus mykiss)</td>
<td>EC50(3h): (respiration rate) &gt;1000 mg/L (activated sludge)</td>
<td>TLM96: &gt; 1,000,000 ppm (Mysidopsis bahia)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>EC50(72h): &gt;34.31 mg/L (Pseudokirchnerella subcapitata) (elemental Barium)</td>
<td>LC50(96h): &gt; 174 mg/L (Danio rerio)</td>
<td>LC50(28d): 42700 ug/L (Oncorhynchus mykiss) (elemental Barium)</td>
<td>LC50(48h): 731 mg/L (Daphnia magna) (similar substance)</td>
</tr>
<tr>
<td>Crystalline silica, quartz</td>
<td>14808-60-7</td>
<td>EC50(72h): 89 mg/L (biomass) (Scenedesmus subspicatus) (similar substance)</td>
<td>LC50(96h): 508 mg/L (Danio rerio) (similar substance)</td>
<td>No information available</td>
<td>LC50(48h): 33.5 mg/L (Ceriodaphnia dubia) (similar substance)</td>
</tr>
</tbody>
</table>

12.2 Persistence and degradability
The methods for determining biodegradability are not applicable to inorganic substances.

<table>
<thead>
<tr>
<th>Substances</th>
<th>Persistence and Degradability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barium sulfate</td>
<td>The methods for determining biodegradability are not applicable to inorganic substances.</td>
</tr>
<tr>
<td>Crystalline silica, quartz</td>
<td>The methods for determining biodegradability are not applicable to inorganic substances.</td>
</tr>
</tbody>
</table>

12.3 Bioaccumulative potential
Does not bioaccumulate

<table>
<thead>
<tr>
<th>Substances</th>
<th>Log Pow</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barium sulfate</td>
<td>BCF: 1.2 - 74.4 L/kg (Lepomis macrochirus)</td>
</tr>
</tbody>
</table>

12.4 Mobility in soil
No information available

Ecotoxicity Hazard Statements
None known

12.6 Other adverse effects
Endocrine Disruptor Information
This product does not contain any known or suspected endocrine disruptors

13. Disposal Considerations

13.1 Waste treatment methods
Disposal Method
Contaminated Packaging
Bury in a licensed landfill according to federal, state, and local regulations.
Follow all applicable national or local regulations. Contaminated packaging may be disposed of by: rendering packaging incapable of containing any substance, or treating packaging to remove residual contents, or treating packaging to make sure the residual contents are no longer hazardous, or by disposing of packaging into commercial waste collection.

14. Transport Information

IMDG/IMO
<table>
<thead>
<tr>
<th>UN Number:</th>
<th>Not restricted.</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN Proper Shipping Name:</td>
<td>Not restricted</td>
</tr>
<tr>
<td>Transport Hazard Class(es):</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>
15. Regulatory Information

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

HSNO Approval Number
HSR002512

Group Name
Additives, Process Chemicals and Raw Materials (Toxic 6.7 HSR002512)

HSNO Controls
Refer to the NZ EPA website for more information: http://www.epa.govt.nz

Approved Handlers
If more than 10 kg (Class 6) is present, then an approved handler must be present when the substance is being handled and when not in use, the substance must be locked away.

Poisons Schedule:
None Allocated

16. Other information, including date of preparation or last revision

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

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.

Key literature references and sources for data
www.ChemADVISOR.com/
NZ CCID

Revision Date: 17-Apr-2014
Revision Note
Not applicable

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End of Safety Data Sheet