MATERIAL SAFETY DATA SHEET

Product Trade Name: BARAZAN® D PLUS

Revision Date: 03-Jan-2008

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Trade Name: BARAZAN® D PLUS
Synonyms: None
Chemical Family: Polysaccharide
Application: Viscosifier

Manufacturer/Supplier
Baroid Fluid Services
Product Service Line of Halliburton
P.O. Box 1675
Houston, TX 77251
Telephone: (281) 871-4000
Emergency Telephone: (281) 575-5000

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

2. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>SUBSTANCE</th>
<th>CAS Number</th>
<th>PERCENT</th>
<th>ACGIH TLV-TWA</th>
<th>OSHA PEL-TWA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xanthan gum</td>
<td>11138-66-2</td>
<td>60 - 100%</td>
<td>10 mg/m³</td>
<td>15 mg/m³</td>
</tr>
</tbody>
</table>

3. HAZARDS IDENTIFICATION

Hazard Overview
May cause eye irritation. Airborne dust may be explosive.

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

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flash Point/Range (F):</td>
<td>Not Determined</td>
</tr>
<tr>
<td>Flash Point/Range (C):</td>
<td>Not Determined</td>
</tr>
<tr>
<td>Flash Point Method:</td>
<td>Not Determined</td>
</tr>
<tr>
<td>Autoignition Temperature (F):</td>
<td>400</td>
</tr>
<tr>
<td>Autoignition Temperature (C):</td>
<td>204</td>
</tr>
<tr>
<td>Flammability Limits in Air - Lower (%)</td>
<td>Not Determined</td>
</tr>
<tr>
<td>Flammability Limits in Air - Upper (%)</td>
<td>Not Determined</td>
</tr>
<tr>
<td>Fire Extinguishing Media</td>
<td>Water fog, carbon dioxide, foam, dry chemical.</td>
</tr>
<tr>
<td>Special Exposure Hazards</td>
<td>Decomposition in fire may produce toxic gases. Organic dust in the presence of an ignition source can be explosive in high concentrations. Good housekeeping practices are required to minimize this potential.</td>
</tr>
<tr>
<td>Special Protective Equipment for Fire-Fighters</td>
<td>Full protective clothing and approved self-contained breathing apparatus required for fire fighting personnel.</td>
</tr>
<tr>
<td>NFPA Ratings:</td>
<td>Health 0, Flammability 1, Reactivity 0</td>
</tr>
<tr>
<td>HMIS Ratings:</td>
<td>Flammability 1, Reactivity 0, Health 0</td>
</tr>
</tbody>
</table>

6. ACCIDENTAL RELEASE MEASURES

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal Precautionary Measures</td>
<td>Use appropriate protective equipment. Avoid creating and breathing dust.</td>
</tr>
<tr>
<td>Environmental Precautionary Measures</td>
<td>None known.</td>
</tr>
<tr>
<td>Procedure for Cleaning / Absorption</td>
<td>Scoop up and remove.</td>
</tr>
</tbody>
</table>

7. HANDLING AND STORAGE

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Handling Precautions</td>
<td>Slippery when wet. Avoid creating or inhaling dust.</td>
</tr>
<tr>
<td>Storage Information</td>
<td>Store away from oxidizers. Store in a cool, dry location. Product has a shelf life of 6 months.</td>
</tr>
</tbody>
</table>

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engineering Controls</td>
<td>Use in a well ventilated area.</td>
</tr>
<tr>
<td>Respiratory Protection</td>
<td>Not normally needed. But if significant exposures are possible then the following respirator is recommended: Dust/mist respirator. (95%)</td>
</tr>
<tr>
<td>Hand Protection</td>
<td>Normal work gloves.</td>
</tr>
<tr>
<td>Skin Protection</td>
<td>Normal work coveralls.</td>
</tr>
<tr>
<td>Eye Protection</td>
<td>Wear safety glasses or goggles to protect against exposure.</td>
</tr>
<tr>
<td>Other Precautions</td>
<td>None known.</td>
</tr>
</tbody>
</table>

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Powder</td>
</tr>
</tbody>
</table>
9. PHYSICAL AND CHEMICAL PROPERTIES

Color: White to yellow
Odor: Slight
pH: 5.5-8.5 (1%)
Specific Gravity @ 20 C (Water=1): 1.6
Density @ 20 C (lbs./gallon): Not Determined
Bulk Density @ 20 C (lbs/ft3): 35-55
Boiling Point/Range (F): Not Determined
Boiling Point/Range (C): Not Determined
Freezing Point/Range (F): Not Determined
Freezing Point/Range (C): 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): Soluble
Solubility in Solvents (g/100ml): Not Determined
VOCs (lbs./gallon): Not Determined
Viscosity, Dynamic @ 20 C (centipoise): Not Determined
Viscosity, Kinematic @ 20 C (centistrokes): Not Determined
Partition Coefficient/n-Octanol/Water: Not Determined
Molecular Weight (g/mole): 1,000,000

10. STABILITY AND REACTIVITY

Stability Data: Stable
Hazardous Polymerization: Will Not Occur
Conditions to Avoid
- Keep away from heat, sparks and flame.
- Incompatibility (Materials to Avoid)
  - Strong oxidizers.
Hazardous Decomposition Products
Carbon monoxide and carbon dioxide.
Additional Guidelines Not Applicable

11. TOXICOLOGICAL INFORMATION

Principle Route of Exposure
Eye or skin contact, inhalation.
Inhalation
- May impede respiration.
Skin Contact None known.
Eye Contact
- May cause mild eye irritation.
Ingestion None known
Aggravated Medical Conditions None known.
Chronic Effects/Carcinogenicity
No data available to indicate product or components present at greater than 1% are chronic health hazards.
Other Information None known.
Toxicity Tests
- Oral Toxicity: LD50: > 5000 mg/kg (Rat)
Dermal Toxicity: Not determined
Inhalation Toxicity: Not determined
Primary Irritation Effect: Not determined
Carcinogenicity: Not determined
Genotoxicity: Not determined
Reproductive / Developmental Toxicity: Not determined

12. ECOLOGICAL INFORMATION

Mobility (Water/Soil/Air) Not determined
Persistence/Degradability BOD(5 Day): 200 mg/g COD: 1600 mg/g
Bio-accumulation Not determined

Ecotoxicological Information
Acute Fish Toxicity: TLM96: 320-560 ppm (Oncorhynchus mykiss)
Acute Crustaceans Toxicity: TLM96: > 75000 ppm (Mysidopsis bahia)
Acute Algae Toxicity: Not determined

Chemical Fate Information Not determined
Other Information Not applicable

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

DOT Not restricted
Canadian TDG Not restricted
ADR Not restricted

Air Transportation
ICAO/IATA Not restricted

Sea Transportation
IMDG Not restricted
15. REGULATORY INFORMATION

US Regulations

US TSCA Inventory
All components listed on inventory.

EPA SARA Title III Extremely Hazardous Substances
Not applicable

EPA SARA (311,312) Hazard Class
None

EPA SARA (313) Chemicals
This product does not contain a toxic chemical for routine annual "Toxic Chemical Release Reporting" under Section 313 (40 CFR 372).

EPA CERCLA/Superfund Reportable Spill Quantity
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
All components listed do not apply to the California Proposition 65 Regulation.

MA Right-to-Know Law
Does not apply.

NJ Right-to-Know Law
Does not apply.

PA Right-to-Know Law
Does not apply.

Canadian Regulations

Canadian DSL Inventory
All components listed on inventory.

WHMIS Hazard Class
Un-Controlled

16. OTHER INFORMATION

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

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

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

Disclaimer Statement
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***END OF MSDS***