

**MATERIAL SAFETY DATA SHEET****Product Trade Name: GBW-30 BREAKER**

Revision Date: 03-Feb-2014

Revision Number: 16

**1. Product and Company Identification**

**Product Identifier**  
**Product Trade Name:** GBW-30 BREAKER  
**Synonyms:** None  
**Chemical Family:** Polysaccharide  
**Internal ID Code:** HM000762

**Product Use**  
**Application:** Breaker

**Manufacturer's Name and Contact Details**  
**Name and Address:** Halliburton Energy Services  
645 - 7th Ave SW Suite 2200  
Calgary, AB  
T2P 4G8  
Canada  
**Emergency Telephone Number:** (281) 575-5000

**Prepared By:** Chemical Compliance  
Telephone: 1-580-251-4335  
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**2. Hazard(s) Identification**

**WHMIS Classification**  
**WHMIS Hazard Class:** D2B Toxic Materials

**WHMIS Symbol(s)****Summary of hazards of the product**

**Hazard Overview:** May cause allergic respiratory reaction. Organic dust in the presence of an ignition source can be explosive in high concentrations. Good housekeeping practices are required to minimize this potential.

**3. Composition/information on Ingredients**

Substances	CAS Number	PERCENT (w/w)	HMIRA Registry Number	Filing Date
Hemicellulase enzyme	9012-54-8	10 - 30%	Not applicable	Not applicable

## 4. First aid measures

### 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. Get medical attention if irritation persists.
<b>Ingestion</b>	Under normal conditions, first aid procedures are not required.

### Most important symptoms and effects, both acute and delayed

May cause allergic respiratory reaction.

### Indication of any immediate medical attention and special treatment needed

**Notes to Physician** Treat symptomatically

## 5. Fire Fighting Measures

### Extinguishing media

#### **Suitable Extinguishing Media**

All standard fire fighting media

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

None known.

### Special hazards arising from the substance or mixture

#### **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.

### Advice for firefighters

#### **Special Protective Equipment for Fire-Fighters**

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

### Hazardous combustion products

Carbon monoxide and carbon dioxide.

## 6. Accidental release measures

### Personal precautions and emergency procedures

#### **Protective Equipment**

Use appropriate protective equipment. Avoid creating and breathing dust.

#### **Environmental Precautionary Measures**

Prevent from entering sewers, waterways, or low areas.

#### **Procedure for Cleaning / Absorption**

Scoop up and remove.

## 7. Handling and Storage

### Precautions for safe handling

Avoid creating or inhaling dust.

### Conditions for safe storage and Incompatible materials for storage

Store away from oxidizers. Store in a cool, dry location. Product has a shelf life of 12 months.

## 8. Exposure Controls/Personal Protection

### Occupational Exposure Limits

**Exposure Limits**

Substances	CAS Number	ACGIH TLV-TWA	OSHA PEL-TWA
Hemicellulase enzyme	9012-54-8	Not applicable	Not applicable

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

Use in a well ventilated area.

**Personal Protective Equipment (PPE)****Respiratory Protection**

Not normally needed. But if significant exposures are possible then the following respirator is recommended:

Dust/mist respirator. (N95, P2/P3)

**Hand Protection**

Normal work gloves.

**Skin Protection**

Normal work coveralls.

**Eye Protection**

Wear safety glasses or goggles to protect against exposure.

**Other Precautions**

None known.

## 9. Physical and Chemical Properties

**Information on basic physical and chemical properties****Physical State:** Powder**Color:** White**Odor:** Odorless**Odor Threshold:** No information availableProperty

Remarks/ - Method

Values**pH:**

7

**pH Concentration of Solution:**

No information available.

**Freezing Point/Range**

No information available.

**Melting Point/Range**

No information available

**Boiling Point/Range (C):**

No information available.

**Flash Point/Range (C):**

No information available.

**Flash Point Method:**

Not Determined

**Autoignition Temperature (C):**

No information available.

**Flammability Limits in Air - Lower (%):**

No information available.

**Flammability Limits in Air - Upper (%):**

No information available.

**Evaporation Rate (Butyl Acetate=1):**

No information available.

**Vapor Pressure @ 20 C (mmHg):**

No information available.

**Vapor Density (Air=1):**

No information available.

**Specific Gravity @ 20 C (Water=1):**

1.5

**Solubility in Water (g/100ml):**

Soluble

**Solubility in other solvents**

No information available.

**Partition Coefficient/n-Octanol/Water:**

No information available.

**Decomposition Temperature (C):**

No information available.

**Viscosity**

No information available

**Explosive Properties**

No information available

**Oxidizing Properties**

No information available

**Other Information****Molecular Weight (g/mole):**

No information available.

**VOC Content (%)**

No information available

## 10. Stability and Reactivity

**Conditions of Reactivity****Conditions to Avoid**

None anticipated

**Hazardous Polymerization:**

Will Not Occur

**Chemical Stability**

Stable

**Sensitivity to Static Discharge**

Not available

**Sensitivity to Mechanical Impact**

Not available

**Incompatible materials**

Strong oxidizers.

**Hazardous Decomposition Products**

Carbon monoxide and carbon dioxide.

<b>11. Toxicological Information</b>
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**Routes of entry**

Eye or skin contact, inhalation.

**Information on Toxicological Effects****Acute effects from exposure****Inhalation**

May cause mild respiratory irritation. May cause allergic respiratory reaction.

**Eye Contact**

May cause mild eye irritation.

**Skin Contact**

None known.

**Ingestion**

None known

**Chronic effects from exposure****Chronic Effects/Carcinogenicity**

No data available to indicate product or components present at greater than 1% are chronic health hazards.

**Irritancy of product****Irritation**

Non-irritating to the skin Non-irritating to the eye

**Sensitization of product****Sensitization**

May cause sensitization by inhalation

**Mutagenicity**

Mutagenic Effects

Not regarded as mutagenic

**Carcinogenicity**

Carcinogenic Effects

No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC, NTP, or OSHA.

**Reproductive Toxicity**

Reproductive Toxicity

This product does not contain any known or suspected reproductive hazards

**Teratogenicity/embryotoxicity**

Teratogenic

Not a confirmed teratogen or embryotoxin.

**Toxicologically synergistic material** Not available**Acute Toxicity**

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
Hemicellulase enzyme	9012-54-8	> 2000 mg/kg (Rat) (Similar substance) > 10000 mg/kg (Rat) > 8000 mg/kg (Mouse)	No data available	> 3.5 mg/L (Rat) 4h >4.86 mg/L (Rat) 4h

## 12. Ecological Information

### Toxicity

#### Ecotoxicity Effects

Substances	CAS Number	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Toxicity for Invertebrates
Hemicellulase enzyme	9012-54-8	EC50(72h) $\geq$ 100 mg/L Total Organic Solids (Pseudokirchnerella subcapitata)	LC50(96h): $\geq$ 100 mg/L Total Organic Solids (Oncorhynchus mykiss)	No information available	EC50: $>$ 39.5 mg/L (Daphnia magna) EC50(48h) $\geq$ 100 mg/L Total Organic Solids (Daphnia magna)

### Persistence and Degradability

Product is biodegradable

### Bioaccumulation potential

Does not bioaccumulate

Substances	Log Pow
Hemicellulase enzyme	-2.95 (Similar substance)

### Mobility in soil

No information available

### Results of PBT and vPvB assessment

No information available.

### Other adverse effects

#### Endocrine Disruptor Information

This product does not contain any known or suspected endocrine disruptors

## 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

### Canadian TDG

**UN Number:**                              Not restricted.  
**UN Proper Shipping Name:**              Not restricted  
**Transport Hazard Class(es):**              Not applicable

### IATA/ICAO

**UN Number:**                              Not restricted.  
**UN Proper Shipping Name:**              Not restricted  
**Transport Hazard Class(es):**              Not applicable

### IMDG/IMO

**UN Number:**                              Not restricted.  
**UN Proper Shipping Name:**              Not restricted  
**Transport Hazard Class(es):**              Not applicable

**Special Precautions for User**              None

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

**15. Regulatory Information**

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

**Canadian Regulations****Canadian DSL Inventory**

All components listed on inventory or are exempt.

**WHMIS Hazard Class**

D2B Toxic Materials

**WHMIS Symbol(s)****US Regulations****US TSCA Inventory**

All components listed on inventory or are exempt.

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

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

**Revision Date:**

03-Feb-2014

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 or legend to abbreviations and acronyms**

WHMIS: Workplace Hazardous Materials Information System

**Key literature references and sources for data**[www.ChemADVISOR.com/](http://www.ChemADVISOR.com/)**Disclaimer Statement**

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**\*\*\*END OF MSDS\*\*\***