HALLIBURTON

SAFETY DATA SHEET POLYSELECT POWER PACTM-L

Product Trade Name:

Revision Number: 3

1. Identification

Revision Date:

1.1. Product IdentifierProduct Trade Name:POLYSELECT POWER PAC™-LSynonymsNoneChemical Family:CarbohydrateInternal ID CodeHM008156

1.2 Recommended use and restrictions on useApplication:Fluid Loss AdditiveUses advised againstConsumer use

1.3 Manufacturer's Name and Contact Details Manufacturer/Supplier BENTONITE Performance Minerals LLC 3000 N Sam Houston Parkway East

21-Sep-2017

Houston, TX 77032 Telephone: (281) 871-7900

BENTONITE Performance Minerals LLC 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

Combustible dust	Combustible dust	
2.2. Label Elements		
Hazard Pictograms		
Signal Word:	Warning	
Hazard Statements	May form combustible dust concentrations in air.	

Precautionary Statements

Prevention	None
Response	None
Storage	None
Disposal	None

2.3 Hazards not otherwise classified

None known

3. Composition/information on Ingredients

Substances	CAS Number	PERCENT (w/w)	GHS Classification - US
Polysaccharide	Proprietary	60 - 100%	Combustible Dust

The specific chemical identity of the composition has been withheld as proprietary. 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 Ingestion	Wash with soap and water. Get medical attention if irritation persists. Rinse mouth with water many times. Get medical attention if symptoms occur

4.2 Most important symptoms/effects, acute and delayed

May cause mild eye, skin, and respiratory irritation.

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

Notes to Physician Treat symptomatically.

5. Fire-fighting measures

5.1. Extinguishing media

Suitable Extinguishing Media Water fog, carbon dioxide, foam, dry chemical. 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

Decomposition in fire may produce harmful 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.

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

Scoop up and remove.

7. Handling and storage

7.1. Precautions for safe handling

Handling Precautions

Avoid creating or inhaling dust. Avoid dust accumulations. Ensure adequate ventilation. Slippery when wet. Avoid contact with eyes, skin, or clothing. Wash hands after use. Launder contaminated clothing before reuse. Use appropriate protective equipment.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Storage Information

Store away from oxidizers. Store in a dry location. Product has a shelf life of 36 months.

8. Exposure Controls/Personal Protection

8.1 Occupational Exposure Limits

Substances	CAS Number	OSHA PEL-TWA	ACGIH TLV-TWA
Polysaccharide	Proprietary	Not applicable	Not applicable

8.2 Appropriate engineering controls

Engineering Controls A well ventilated area to control dust levels. Local exhaust ventilation should be used in areas without good cross ventilation.

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	Not normally needed. But if significant exposures are possible then the following
	respirator is recommended:
	Dust/mist respirator. (N95, P2/P3)
Hand Protection	Use gloves which are suitable for the chemicals present in this product as well as
	other environmental factors in the workplace.
Skin Protection	Wear protective clothing appropriate for the work environment.
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	White to off white
Odor:	Odorless	Odor	No information available

Property Remarks/ - Method pH: **Freezing Point / Range** Melting Point / Range **Boiling Point / Range Flash Point** Flammability (solid, gas) Upper flammability limit Lower flammability limit Evaporation rate Vapor Pressure Vapor Density **Specific Gravity** Water Solubility Solubility in other solvents Partition coefficient: n-octanol/water **Autoignition Temperature Decomposition Temperature** Viscosity **Explosive Properties Oxidizing Properties**

Threshold:

Values

6.5-9 (1%) No data available No data available No data available 221 °C / 430 °F No data available 1.6 Soluble in water No data available No data available 400 °C / 752 °F No data available No data available No information available No information available

9.2. Other information VOC Content (%) Bulk Density

No data available 40-55 lbs/ft3

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

Keep away from heat, sparks and flame.

10.5. Incompatible materials

Strong oxidizers.

10.6. Hazardous decomposition products

Carbon monoxide and carbon dioxide.

11. Toxicological Information

11.1 Information on likely routes of exposure

Principle Route of Exposure Eye or skin contact, inhalation.

<u>11.2 Symptoms related to the physical, chemical and toxicological characteristics</u> Acute Toxicity

Inhalation	May cause mild respiratory irritation.	
Eye Contact	May cause mild eye irritation.	
Skin Contact	May cause mild skin irritation.	
Ingestion	None known.	

Chronic Effects/Carcinogenicity No data available to indicate product or components present at greater than 0.1% are chronic health hazards.

11.3 Toxicity data

Toxicology data f	or the compone	ents		
Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
Polysaccharide	Proprietary	27000 mg/kg (Rat)	2000 mg/kg (Rabbit)	5800 mg/m ³ (Rat) 4h
Substances	CAS Number	Skin corrosion/irritation		
Polysaccharide		Not irritating to skin in rabbits.		
Substances	CAS Number	Serious eye damage/irritatio	n	
Polysaccharide		Non-irritating to rabbit's eye		
Substances	CAS Number	Skin Sensitization		
Polysaccharide		Did not cause sensitization on labo	oratory animals	
Substances	CAS Number	Respiratory Sensitization		
Polysaccharide		No information available		
Substances	CAS Number	Mutagenic Effects		
Polysaccharide			nic effects. In vivo tests did not sho	w mutagenic effects. (similar
Substances	CAS Number	Carcinogenic Effects		
Polysaccharide			in animal experiments (similar sub	stances)
Substances	CAS Number	Reproductive toxicity		
Polysaccharide			ffects on fertility. Did not show terat	ogenic effects in animal
Substances	CAS Number	STOT - single exposure		
Polysaccharide		No information available		
Substances	CAS Number	STOT - repeated exposure		
Polysaccharide		No significant toxicity observed in	animal studies at concentration rec	quiring classification.
Substances	CAS Number	Aspiration hazard		
Polysaccharide		Not applicable		

12. Ecological Information

12.1. Toxicity

Ecotoxicity effects

Product is not classified as hazardous to the environment.

Substance Ecotoxicity Data

Substances	CAS Number	Toxicity to Algae	Toxicity to Fish	Toxicity to	Toxicity to Invertebrates
			-	Microorganisms	_
Polysaccharide	Proprietary	No information available	TLM96: 10000 ppm	No information available	EC50 (48h) 1000-3300
,			(Oncorhynchus mykiss)		mg/L (Crangon crangon)
			LC50 (96h) 20000 mg/L		
			(Oncorhynchus mykiss)		

12.2. Persistence and degradability

Substances	CAS Number	Persistence and Degradability
Polysaccharide	Proprietary	No information available

12.3. Bioaccumulative potential

Substances	CAS Number	Log Pow
Polysaccharide	Proprietary	No information available

12.4. Mobility in soil

Substances	CAS Number	Mobility
Polysaccharide	Proprietary	No information available

12.5 Other adverse effects

No information available

13. Disposal Considerations

<u>13.1. Waste treatment methods</u> Disposal 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 UN proper shipping name: Transport Hazard Class(es): Packing Group: Environmental Hazards:	Not restricted Not restricted Not applicable Not applicable Not applicable
Canadian TDG UN Number UN proper shipping name: Transport Hazard Class(es): Packing Group: Environmental Hazards:	Not restricted Not restricted Not applicable Not applicable Not applicable
IMDG/IMO UN Number UN proper shipping name: Transport Hazard Class(es): Packing Group: Environmental Hazards:	Not restricted Not restricted Not applicable Not applicable Not applicable
IATA/ICAO UN Number UN proper shipping name: Transport Hazard Class(es): Packing Group: Environmental Hazards:	Not restricted Not restricted Not applicable Not applicable Not applicable

<u>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</u> Not applicable <u>Special Precautions for User</u> 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
Polysaccharide	Proprietary	Not applicable

EPA SARA Title III Extremely Hazardous Substances

Substances	CAS Number	EPA SARA Title III Extremely Hazardous Substances
Polysaccharide	Proprietary	Not applicable

EPA SARA (311,312) Hazard Class

None

EPA SARA (313) Chemicals

Substances	CAS Number	Toxic Release Inventory (TRI) -	Toxic Release Inventory (TRI) -
		Group I	Group II
Polysaccharide	Proprietary	Not applicable	Not applicable

EPA CERCLA/Superfund Reportable Spill Quantity

Substances	CAS Number	CERCLA RQ
Polysaccharide	Proprietary	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
Polysaccharide	Proprietary	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
Polysaccharide	Proprietary	Not applicable	Not applicable	Not applicable
	• • • •	• • • •	• • • •	· · · · ·

NFPA Ratings:	Health 1, Flammability 1, Reactivity 0
HMIS Ratings:	Health 1, Flammability 1, Physical Hazard 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:	21-Sep-2017
Reason for Revision	Name change

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 - dav 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 mercurv 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/ NZ CCID

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End of Safety Data Sheet