

# X-PLORE PAC-L PLUS

Product Data Sheet

Polymer

## Product Description

X-PLORE PAC-L PLUS is a polyanionic cellulose polymer that provides filtration control in most water-based drilling fluids without increasing viscosity significantly. When added to a bentonite slurry, X-PLORE PAC-L PLUS produces a drilling mud system suitable for drilling in sandy formation.

## Applications/Functions

- Provides filtration control in fresh or brackish water-based drilling fluids

## Typical Properties

Property	Specification
• Appearance	White, free-flowing powder
• pH (1%) Aqueous Solution	7.75

## Recommended Treatment

- The following recommended treatments should be added using a hopper or into the vortex of a high-speed mixer
- Add material to complete circulating system in a uniform manner

Approximate Amounts of X-PLORE PAC™-L PLUS Polymer Added to Water-Based Fluids		
Added to bentonite slurry	lbs/100 gallons	kg/m <sup>3</sup>
• To reduce filtration rate and improve borehole stability	0.5 – 2.0	0.6 – 2.4

## Packaging

X-PLORE PAC-L PLUS polymer is packaged in 50-lb (22.7 kg) bags, 40-lb (18.1 kg) pail and plastic pail containing 10 airtight sealed plastic bags with each bag weighing 2 lbs (0.91 kg).

Because the conditions of use of this product are beyond the seller's control, the product is sold without warranty either express or implied and upon condition that purchaser make its own tests to determine the suitability for purchaser's application. Purchaser assumes all risk of use and handling of this product. This product will be replaced if defective in manufacture or packaging or if damaged. Except for such replacement, seller is not liable for any damages caused by this product or its use. The statements and recommendations made herein are believed to be accurate. No guarantee of their accuracy is made, however.





# SAFETY DATA SHEET

## SECTION 1 - IDENTIFICATION

1(a): PRODUCT IDENTIFIER: X-PLORE PAC-L PLUS

1(b): OTHER MEANS OF IDENTIFICATION: None  
INTERNAL SDS NUMBER: 1519

1(c): RECOMMENDED USE AND RESTRICTION: Filtrate Reducer  
No restriction information available.

1(d): MANUFACTURER: GLöB Energy Corporation  
5719 Armour Dr.  
Houston, TX 77020  
USA

1(e): EMERGENCY PHONE NUMBER: Chemtrec 1-800-424-9300

## SECTION 2 – HAZARD(S) IDENTIFICATION

2(a): CLASSIFICATION IN ACCORDANCE WITH PARAGRAPH (d) of §1910.1200

Combustible Dust

Combustible Dust

2(b): HAZARD SYMBOL:



SIGNAL WORD: Warning

HAZARD STATEMENT(S): May form combustible dust concentrations in air.

PRECAUTIONARY STATEMENT(S):

Prevention: None

Response: None

Storage: None

Disposal: None

2(c): HAZARDS NOT OTHER CLASSIFIED: None known.

## SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS

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

## SECTION 4 – FIRST AID MEASURES

### 4(a): DESCRIPTION OF FIRST AID MEASURES:

General Advice:	In case of serious or persistent conditions, call a doctor or emergency 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. Give nothing by mouth. Obtain immediate medical attention.

### 4(b): MOST IMPORTANT SYMPTOMS/EFFECTS, ACUTE AND DELAYED:

No significant hazards expected.

### 4(c): INDICATION OF IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED, IF NECESSARY:

Note to physician: Treat symptomatically

## SECTION 5 – FIRE FIGHTING MEASURES

### 5(a): SUITABLE (AND UNSUITABLE) EXTINGUISHING MEDIA:

Suitable extinguishing media:	Water, fog, carbon dioxide, foam, dry chemical.
Unsuitable extinguishing media:	None known.

### 5(b): SPECIFIC HAZARDS ARISING FROM THE CHEMICAL OR MIXTURE:

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(c): SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIRE-FIGHTERS:

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

## SECTION 6 – ACCIDENTAL RELEASE MEASURES

### 6(a): PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT, AND EMERGENCY PROCEDURES:

Personal precautions:	Avoid creating and breathing dust. Slippery when wet.
Protective equipment:	Wear appropriate personal protective equipment.
Environmental precautions:	None known.

### 6(b): METHODS FOR MATERIAL CONTAINMENT AND CLEANING UP:

Scoop up and remove.

## SECTION 7 – HANDLING AND STORAGE

### 7(a): PRECAUTIONS FOR SAFE HANDLING:

Avoid contact with eyes, skin, or clothing. Avoid creating or inhaling dust. Avoid dust accumulations. Slippery when wet. Ground and bond containers when transferring from one container to another. Wash hands after use. Launder contaminated clothing before reuse. Do NOT consume food, drink, or tobacco in contaminated areas.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety practice.

7(b): CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES:

Store away from oxidizers. Keep container closed when not in use. Store in a cool, dry location. Store away from direct sunlight. Keep from heat, sparks, and open flames. Store in a well ventilated area. Product has a shelf life of 36 months.

## SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

8(a): OCCUPATIONAL EXPOSURE LIMITS:

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

8(b): APPROPRIATE ENGINEERING CONTROLS: A well ventilated area to control dust levels. Local exhaust ventilation should be used in areas without good cross ventilation.

8(c): INDIVIDUAL PROTECTION MEASURES, SUCH AS 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.

Eye protection: Wear safety glasses or goggles to protect against exposure.

Hand protection: Normal work gloves.

Skin protection: Normal work overalls.

Respiratory protection: Not normally needed, but if significant exposures are possible then the following respirator is recommended: Dust/Mist respirator. (N95, P2/P3)

Clothing protection: Wear normal materials handling clothing.

Other protection: None known.

## SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

9(a): APPEARANCE:

Physical state: Powder  
Color: White to off white

9(b): ODOR: Odorless

9(c): ODOR THRESHOLD: Not information available

9(d): pH: 5-9 (1%)

9(e): MELTING POINT/FREEZING POINT: No information available

9(f): INITIAL BOILING POINT/RANGE: No information available

9(g): FLASH POINT: No data available

9(h): EVAPORATION RATE: No data available

9(i): FLAMMABILITY (SOLID, GAS): No data available

9(j): UPPER/LOWER FLAMMABILITY OR EXPLOSIVE LIMITS:

Upper flammability limit: No data available

Lower flammability limit: No data available

9(k): VAPOR PRESSURE:	No data available
9(l): VAPOR DENSITY:	No data available
9(m): RELATIVE DENSITY(Specific Gravity):	No data available
9(n): SOLUBILITY(IES):	
Solubility in water:	Soluble in water
Solubility in other solvents:	No data available
9(o): PARTITION COEFFICIENT: N-OCTANOL/WATER:	No data available
9(p): AUTO-IGNITION TEMPERATURE:	No data available
9(q): DECOMPOSITION TEMPERATURE:	No data available
9(r): VISCOSITY:	Not determined
9(s): EXPLOSIVE PROPERTIES:	No data available
9(t): OXIDIZING PROPERTIES:	No data available
9(u): OTHER INFORMATION (VOC Content %):	No data available

## SECTION 10 – STABILITY AND REACTIVITY

10(a): REACTIVITY:	Not expected to be reactive.
10(b): CHEMICAL STABILITY:	Stable under normal conditions.
10(c): POSSIBILITY OF HAZARDOUS REACTION:	Will not occur.
10(d): CONDITIONS TO AVOID:	None anticipated.
10(e): INCOMPATIBLE MATERIALS:	Avoid strong oxidizers.
10(f): HAZARDOUS DECOMPOSITION PRODUCTS:	Carbon monoxide and carbon dioxide.

## SECTION 11 – TOXICOLOGICAL INFORMATION

11(a): INFORMATION ON LIKELY ROUTES OF EXPOSURE:	
Principle route of exposure:	Eye or skin contact, inhalation
11(b): SYMPTOMS RELATED TO THE PHYSICAL, CHEMICAL AND TOXICOLOGICAL CHARACTERISTICS:	
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.

## 11(c): DELAYED AND IMMEDIATE EFFECTS AND ALSO CHRONIC EFFECTS

Chronic Effects/Carcinogenicity:

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

Substance	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
Polysaccharide	Proprietary	27000 mg/kg (Rat)	2000 mg/kg (Rabbit)	5800 mg/m <sup>3</sup> (Rat) 4h

Substance	CAS Number	Skin Corrosion/Irritation
Polysaccharide	Proprietary	Not irritating to skin in rabbits.

Substance	CAS Number	Eye Damage/Irritation
Polysaccharide	Proprietary	Non-irritating to rabbit's eye.

Substance	CAS Number	Skin Sensitization
Polysaccharide	Proprietary	Did not cause sensitization on laboratory animals.

Substance	CAS Number	Respiratory Sensitization
Polysaccharide	Proprietary	No information available.

Substance	CAS Number	Mutagenic Effects
Polysaccharide	Proprietary	In vitro tests did not show mutagenic effects. In vivo tests did not show mutagenic effects. (Similar Substances)

Substance	CAS Number	Carcinogenic Effects
Polysaccharide	Proprietary	Did not show carcinogenic effects in animal experiments. (Similar Substances)

Substance	CAS Number	Reproductive Toxicity
Polysaccharide	Proprietary	Animal testing did not show any effects on fertility. Did not show teratogenic effects in animal experiments.

Substance	CAS Number	STOT – Single Exposure
Polysaccharide	Proprietary	No information available.

Substance	CAS Number	STOT – Repeated Exposure
Polysaccharide	Proprietary	No significant toxicity observed in animal studies at concentration requiring classification.

Substance	CAS Number	Aspiration Hazard
Polysaccharide	Proprietary	Not applicable.

11(d): NTP/IARC/OSHA CARCINOGEN:

No

## SECTION 12 – ECOLOGICAL INFORMATION

### 12(a): ECOTOXICITY:

Substance	CAS Number	Toxicity to algae	Toxicity to fish	Toxicity to microorganisms	Toxicity to invertebrates
Polysaccharide	Proprietary	No information available	TLM96 10000 ppm (Oncorhynchus mykiss) LC50 (96h) 20000 mg/L (Oncorhynchus mykiss)	No information available.	EC50 (48h) 1000-3300 mg/L (Crangon Crangon)

12(b): PERSISTENCE AND DEGRADABILITY: Not determined

12(c): BIOACCUMULATIVE POTENTIAL: Not determined

12(d): MOBILITY IN SOIL: Not determined

12(e): OTHER ADVERSE EFFECTS: Not determined

## SECTION 13 – DISPOSAL CONSIDERATIONS

### 13(a): WASTE TREATMENT METHODS:

Disposal method: Disposal should be made in accordance with federal, state, and local regulations.

Contaminated packaging: Follow all applicable national or local regulations.

## SECTION 14 – TRANSPORT INFORMATION

### US D.O.T.:

UN Number: Not restricted

UN Proper shipping name: Not restricted

Transport Hazard Class: Not applicable

Packing group: Not applicable

Environmental Hazards: Not applicable

US D.O.T. Bulk: Not restricted

### Canadian TDG:

UN Number: Not restricted

UN Proper shipping name: Not restricted

Transport Hazard Class: Not applicable

Packing group: Not applicable

Environmental hazards: Not applicable

### IMDG/IMO:

UN Number: Not restricted

UN Proper shipping name: Not restricted

Transport Hazard Class: Not applicable

Packing group: Not applicable

Environmental hazards:	Not applicable
IATA/ICAO:	
UN Number:	Not restricted
UN Proper shipping name:	Not restricted
Transport Hazard Class:	Not restricted
Packing group:	Not applicable
Environmental hazards:	Not applicable

TRANSPORT IN BULK ACCORDING TO ANNEX II OF MARPOL 73/78 AND THE IBC CODE: Not applicable

SPECIAL PRECAUTIONS FOR USER: None

## SECTION 15 – REGULATORY INFORMATION

### US REGULATIONS:

US TSCA Inventory:	All components listed on inventory or are exempt.
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:	One or more components listed.
PA Right-to-know law:	Does not apply

CANADIAN REGULATIONS: All components listed on inventory or are exempt

## SECTION 16 – OTHER INFORMATION

NFPA RATING:	HEALTH:	1	HMIS RATING:	HEALTH:	1
	FLAMMABILITY:	1		FLAMMABILITY:	1
	REACTIVITY:	0		REACTIVITY:	0
	SPECIAL:	0		SPECIAL:	0

Hazard scale: 0=Minimal 1=Slight 2=Moderate 3=Serious 4=Severe

Employee training: Employees should be made aware of all hazards of this material, as stated in this SDS, before handling it.

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KEY OR LEGEND TO ABBREVIATIONS AND ACRONYMS:

ADR - The European Agreement concerning the International Carriage of Dangerous Goods by Road  
AS/NZS 1715 - New Zealand Standard on Selection, use and maintenance of respiratory protective equipment  
bw – body weight  
CAS – Chemical Abstracts Service  
C - Celsius  
CLP – REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on  
Classification, Labelling and Packaging of substances and mixtures  
d - day  
EC – European Commission  
EC10 – Effective Concentration 10%  
EC50 – Effective Concentration 50%  
EEC – European Economic Community  
EN 374 - European standard on Protective gloves against chemicals and micro-organisms  
EN 149 - European standard on filtering halfmasks to protect against particles  
ErC50 – Effective Concentration growth rate 50%  
FFP - Filtering Facepieces  
h - hour  
IATA/ICAO - International Air Transport Association / International Civil Aviation Organization  
IBC Code – International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk  
IMDG/IMO - International Maritime Dangerous Goods / International Maritime Organization  
LC50 – Lethal Concentration 50%  
LD50 – Lethal Dose 50%  
LL0 – Lethal Loading 0%  
LL50 – Lethal Loading 50%  
MAK - Maximum Workplace Concentration  
MARPOL – International Convention for the Prevention of Pollution from Ships  
mg/kg – milligram/kilogram  
mg/L – milligram/liter  
mg/m<sup>3</sup> - milligram/cubic meter  
mm - millimeter  
mmHg - millimeter mercury  
NDS - OEL-TWA [Poland najwyższe dopuszczalne stężenie na stanowisku pracy]  
NDS - najwyższe dopuszczalne stężenie na stanowisku pracy  
NIOSH – National Institute for Occupational Safety and Health  
NOEC – No Observed Effect Concentration  
NTP – National Toxicology Program  
OEL – Occupational Exposure Limit  
PBT – Persistent Bioaccumulative and Toxic  
PC – Chemical Product category  
PEL – Permissible Exposure Limit  
ppm – parts per million  
PROC – Process category  
REACH – REGULATION (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL  
concerning the Registration, Evaluation, Authorization and Restriction of Chemicals  
RID - The European Agreement concerning the International Carriage of Dangerous Goods by Rail  
R/H-phrases - Risk/Hazard-phrases  
STEL – Short Term Exposure Limit  
SU – Sector of Use category  
SZW - Netherlands Ministry of Social Affairs and Employment  
TWA – Time-Weighted Average  
UN – United Nations  
UK - United Kingdom

VLA-EC - short-time excursion limits [Spain valores límite ambientales para la exposición de corta duración]  
VLA-ED - time-weighted average values for a whole work shift [Spain valores límite ambientales para la exposición diaria]  
VOC – Volatile Organic Carbon  
vPvB – very Persistent and very Bioaccumulative  
w/w - weight/weight

Disclaimer: All information and recommendations concerning this product is based on tests and data believed to be reliable; however, it is the user's responsibility to determine the safety, toxicity, and suitability for the user's own use of the product described herein. Since the actual use by others is beyond our control, no guarantee expressed or implied is made by GLöB Energy Corporation. Nor is the information herein to be construed as absolutely complete since additional information may be necessary or desirable when particular conditions exist or because of applicable laws or government regulations.