PRODUCT DATA SHEET
POLYANIONIC CELLULOSE (PAC)

1. Product Name

Polyanionic Cellulose (PAC)

2. General Description

PAC is a water-soluble polymer produced only from cellulose chemically reacted with carboxy-methyl (anionic) groups. The product obtained is further purified to significantly increase the active polymer content.

It's widely used in oil and gas field industry for applications of fluid loss control, viscosity and shale inhibition. PAC typically provide higher degree of substitution and purity as comparing with CMC products. The product is a free-flowing and/or granular powder.

3. Packaging

Standard package size is 25 kgs or 50 lbs multi-wall paper sacks with a plastic liner. Customized package such as bulk bag is available upon customers' request.

4. Storage and Shelf Life

The shelf life is limited to 2 years, it is important to store the products in a dry and well-conditioned place in order to achieve the maximum storage period.

5. Safety and Handling

Refer to Material Safety Data Sheet (MSDS) for detailed safety information.

6. Specifications

drilling grade PAC meet the following the specifications:

Items	Specifications
Appearance	White-off free-flowing Powder or Granulated Powder
Starch or starch derivates presence	No
Moisture content, %	Max. 10

7. Typical Grade

PAC are generally categorized into following typical grades, and detailed specifications can be found in Table A.

- PAC-LV, also referred as PAC low-viscosity grade;
- PAC-HV, also referred as PAC regular grade (PAC-R) or high-viscosity grade;
- PAC-AD, also referred as dispersible grade PAC;
- PAC-XAL, also referred as extra low viscosity PAC.

PRODUCT DATA SHEET
POLYANIONIC CELLULOSE (PAC)

Table A.

PAC LV

Grade	Apparent viscosity, cP	Filtrate volume, millilitres	Purity, %	Dispersibility
PAC-L65A	Max. 40	Max. 16	Min. 65	-
PAC-L75A			Min. 75	
PAC-L85A			Min. 85	
PAC-L92A			Min. 92	
PAC-L95A			Min. 95	
PAC-L95AD			Min. 95	Dispersible
PAC-L98A			Min. 98	-
PAC-XAL	Max. 10		-	

PAC HV

Grade	Apparent viscosity, cP	Filtrate volume, millilitres	Purity, %	Dispersibility
PAC-H85A	Min. 50	Max. 23	Min. 85	-
PAC-H92A			Min. 92	
PAC-H95A			Min. 95	
PAC-H95AD			Min. 95	Dispersible
PAC-H98A			Min. 98	-