

**OIL & GAS DEVELOPMENT COMPANY LIMITED**  
**PROCUREMENT DEPARTMENT, ISLAMABAD**  
**FOREIGN SECTION A**

(To be completed, filled in, signed  
and stamped by the principal)

ANNEXURE 'A'

**Material** Poly Anionic Cellulose –Regular (PAC–R)  
**Tender Enquiry No** PROC–FA/CB/WS–4702/2020  
**Due Date**  
**Evaluation Criteria** FULL PKG.

**SCHEDULE OF REQUIREMENT**

Sr No	Description	Unit	Quantity	Unit Price (FOB)	Total Price (FOB)	Unit Price C & F BY SEA	Total Price C & F BY SEA	Deviated From Tender Spec. If Any
1	POLY ANIONIC CELLULOSE (PAC–R)	Metric Ton	250					

**Note:**

- 1. Bid Bond Amount:** Bid(s) must be accompanied by an upfront bid bond in the form of pay order/ demand draft or bank guarantee issued by scheduled bank of Pakistan or a branch of foreign bank operating in Pakistan for an amount of US \$15,000/= (United States Dollar Fifteen Thousand Only) or equivalent Pak Rupees, with technical bid and valid for 150 days from the date of opening of the bids.
- 2. Delivery period:** Delivery period of the quoted product should not be more than 120 days from the date of establishment of Letter of Credit (LC).



**TECHNICAL SPECIFICATIONS SHEET OF**  
**POLY ANIONIC CELLULOSE - REGULAR GRADE (PAC-R)**

Poly Anionic Cellulose is a long chain Polymer of high molecular weight, readily dispersible in water base drilling fluids of salinity ranging from zero to saturated salt. It is used primarily as viscosifier, highly effective fluid loss reducer and secondary as shale inhibitor, mostly in the low solid mud.

Each bidder should fill-in the table given below with the properties of their quoted product. Only to write "conforming to" or **OK** will not be sufficient.

**A) TECHNICAL SPECIFICATIONS**

<b>SR. NO</b>	<b>DESCRIPTION</b>	<b>REQUIRED SPECIFICATION</b>	<b>PROPERTIES OF THE QUOTED PRODUCT</b>
01.	Appearance	Off white, powder.	
02.	Active content % (on dry basis) ASTM-D1439	≥ 95 %	
03.	Degree of substitution ASTM-D1439	0.9 Min	
04.	pH of 1% solution (at 25 °C)	7 – 8 Approx.	
05.	Moisture content ASTM-D1439	8% Maximum.	
06.	Thermal Stability (while performance testing at high temperature) Ref. C (ii) of Performance test.	266 °F (130 °C)	
07.	Bulk Density, (g/L) ASTM-D1439	600-900	
08.	Sieve limits (%) Retained on 35 Mesh ASTM	3.0 Max	

B) PERFORMANCE TESTS:

SR. NO.	PERFORMANCE TESTS	REQUIRED SPECIFICATIONS	EXACT VALUE OF THE OFFERED PRODUCT
01.	<p>Apparent viscosity (cp) of 1.0% (w/v) suspension of product at <math>24 \pm 2</math> °C, prepared by stirring for 15 minutes in Hamilton Beach Mixer at high speed in;</p> <p>I. Distilled Water</p> <p>II. 4% salt water prepared by dissolving 4gm LR grade NaCl in 100ml of distilled water.</p>	<p>60 (Minimum)</p> <p>50 (Minimum)</p>	
02.	<p>Yield of 15 cp (apparent viscosity) suspension, prepared by stirring for 15 minutes in Hamilton Beach Mixer at high speed in;</p> <p>I. Distilled water</p> <p>II. 4% salt solution as prepared at 1(b).</p>	<p>250 Cum/M.Ton (Min)</p> <p>200 Cum/M.Ton (Min)</p>	
03.	<p><b><u>Performance in fresh water mud:</u></b></p> <p>a) Preparation of base mud</p> <p>Prepare a 10% API treated Bentonite suspension in distilled water, age for 24 hrs at <math>90 \pm 2</math> °C, dilute with distilled water, stir for 15 minutes in Hamilton Beach Mixer at high speed. Treat with 10% NaOH solution to adjust pH 9.0-9.5. Adjust apparent viscosity in the range of 15-20cp by dilution with distilled water, if necessary. Determine the yield point and water loss of this bentonite suspension at <math>24 \pm 2</math> °C.</p> <p>I. Apparent viscosity, 15-20 cp</p> <p>II. Yield point (lbs/100ft<sup>2</sup>), to be determined.</p> <p>III. API Water loss (ml), to be determined.</p> <p>b) Preparation of treated mud</p> <p>Treat base mud at 3(a) with 0.5% (w/v) poly anionic cellulose, stir for 15 minutes in Hamilton Beach Mixer at high speed. Divide into two parts;</p> <p><b><u>c) Performance at</u></b></p> <p><i>(i) Low Temp. (<math>24 \pm 2</math> °C)</i></p> <p>Stir the first portion at 3(b) in Hamilton Beach Mixer at high speed for 05 minutes and check the following properties.</p>		



	<p>I. Apparent viscosity, cp                  II. Yield point, lbs/100ft<sup>2</sup>                  III. API water loss, ml  <u>(ii) High Temp. (130±2°C)</u>                  Age 2nd portion of mud at 3(b) in hot rolled conditions at 130°C for 24hrs. After aging, cool it down to 24±2°C. Stir in Hamilton Beach Mixer at high speed for 5 minutes and determine the parameters which should be as under;</p> <p>I. Apparent viscosity, cp                  II. Yield point, lbs/100ft<sup>2</sup>                  III. API water loss, ml</p>	<p>4 times of 3(a)I (Min)                  4 times of 3(a)II (Min)                  40% of 3(a)III (Max)</p> <p>3 times of 3(a)I (Min)                  3 times of 3(a)II (Min)                  45% of 3(a)III (Max)</p>	
<p>04.</p>	<p><b><u>Performance test in salt water mud:</u></b>                  a) Preparation of base mud                  Prepare a 10% (w/v) API treated bentonite suspension in distilled water, age for 24 hrs at 90±2°C. To this suspension add 4% (w/v) LR grade sodium chloride, age for 24 hrs at room temperature 24±2°C and adjust pH 9.0 to 9.5 with 10% NaOH solution. Dilute with 4% salt water (4% LR grade NaCl solution in distal water) and adjust apparent viscosity as under;</p> <p>I. Apparent viscosity, 15-20 cp                  II. Yield point (lbs/100ft<sup>2</sup>), to be measured.                  III. API water loss (ml), to be measured.</p>		
	<p><b><u>b) Treated mud</u></b>                  Treat the base mud prepared as per 4(a) with 0.5% (w/v) poly anionic cellulose (R). Stir for 15 minutes in Hamilton Beach Mixer at high speed and Determine the apparent viscosity, yield point and water loss of the mud at 24±2°C.</p> <p>I. Apparent viscosity, cp                  II. Yield point, lbs/100ft<sup>2</sup>                  III. API water loss, ml</p>	<p>2 times of 4(a)-I (Min)                  1.5 times of 4(a)-II (Min)                  20% of 4(a)-III (Max)</p>	



**E) NECESSARY ATTACHMENTS FOR TECHNICAL BID:**

SR. NO.	DESCRIPTION	ATTACHED/ PROVIDED OR NOT.	
01.	Product Data Memorandums of quoted product / mud chemical in original printed by manufacturer.	Attached/ attached	Not
02.	Material Safety Data Sheets of quoted product / mud chemical in original printed by manufacturer.	Attached/ attached	Not
03.	Valid ISO-9001-2008 certificate for manufacturing / Production of the quoted product / mud chemical.	Attached/ attached	Not
04.	Original authority letter issued by the manufacturer to bidder for quoting their product.	Attached/ attached	Not
05.	1 Kg sample of quoted chemical.	Provided/ provided	Not

**PACKAGING:**

The chemical should be packed as **25kgs** net per bag in export quality new multi-wall paper bags having thick, high density inner polythene liner for rendering the material completely moisture proof. The material should be palletized as **500-1000 KG**, wrapped with thick polyethylene sheet and tightly strapped. The packaging of the required mud chemical should be of international standards and capable to safe transportation during ocean / road journey from port of shipment to well site and to withstand harsh weather conditions at the storage points and at the well sites / locations.

**MARKING:**

Each bag should have clearly legible marking, as given below;

- (a) Name of the product.
- (b) Name of the Manufacturer.
- (c) Date/month/ year of manufacture.
- (d) Minimum shelf life
- (e) Supply order number against which supplies are made.
- (f) Lot No.\_\_\_\_\_/ Batch No.\_\_\_\_\_.

**INSTRUCTIONS TO THE BIDDERS/ TERMS & CONDITIONS:**

1. Bids evaluation criteria is technically responsive and financially the lowest.
2. The manufacturer of the quoted product must have minimum **05** years' experience of manufacturing & supplying of indented chemical to E & P companies specifically, duly supported by valid authentic **ISO 9001-2008** certificate as a proof for manufacturing/ production of the quoted product / Mud chemical consecutively from: last 05 years. Bidder must provide inquiry guidance to confirm authenticity of ISO certificate. In case of any ambiguity, the certificate will be verified from issuing authority. The certificate duly submitted along with bid will be considered final. No additional certificate will be entertained at any stage of the case.



3. **Minimum shelf life** of the quoted product **should not be less than 03 years.**
4. Technical Specifications Sheet of the quoted product duly filled-in must be enclosed in the technical bid.
5. **Delivery period** of the quoted product should not be more than **120 Days after opening of letter of credit (LC).** However, the supplier must commence consignment wise delivery within 45 days as per following schedule, failing which action will be taken as per rules

Description	1 <sup>st</sup> Consignment	2 <sup>nd</sup> Consignment
PAC-R	100 M.Ton within 45 days after opening of Letter of Credit (LC)	150 M.Ton in next 75 days with valid expiry date of 03 years.

6. All submitted bids will be evaluated strictly as per TOR of tender inquiry as well as on the basis of previous performance (supply record as per shipment) of bidder, manufacturer and local agent, failing which will lead to disqualification of Bid thereof.
7. An authority letter in original issued by the manufacturer for allowing the bidder to quote their product for this particular tender enquiry, duly signed/stamped, must be attached with the technical bid in case the bidder is not manufacturer.
8. All the bidders must have to provide/ submit the **1 Kg sample** of the quoted product (conforming to OGDCL requirement as per Section **(A & B)** along with technical bids at the time of bid submission. The valid receipt/tracking details supplied through national / international courier services has to be accompanied with the bid. If the sample is not submitted with the bid, it will not be accepted in any case & will lead to disqualification of bid.
9. The quoted product or item from country of origin **“INDIA”** is not acceptable as per SRO-927(I)/2019 dated 09-08-2019.
10. Prior to shipment of the material, if desired by OGDCL, the supplier of the product will be responsible for carrying out the inspection & Lab analysis of the material from the OGDCL approved inspecting agency/Lab for confirmation of material as per tender specifications. The inspector will be hired by OGDCL .After physical inspection, one representative sample of the chemical will be dispatched by the inspectors directly to OGDCL. Later on its Lab Evaluation report will be submitted directly to OGDCL. After examination/scrutiny, OGDCL will inform about acceptance/rejection of material/report.
11. Shipment is required to be made in containers for minimizing damages to the costly Chemical.
12. The final acceptance of the requisite consignment will be made after physical inspection of shipment & Lab analysis of representative sample for conforming to technical specs of tender documents. The lab analysis will be undertaken at OGDCL own or any other reputable lab of OGDCL choice and acceptance of the results will be binding over the supplier.
13. Material must have to be lifted back by the vendor if not found as per technical specification of this particular tender enquiry even after its delivery at the base stores and have to replace with the material conforming to technical specifications with no cost to OGDCL.
14. If any of the information provided by the bidders proves wrong or any counterfeited/unlawful document is submitted to mislead department, OGDCL reserves the right to disqualify such bids without further assigning any reason. Such bidders will not be eligible to bid for any future procurement.

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