

SHALE STABILIZER (SODIUM ASPHALT SULFONATE)

Shale stabilizers is a versatile, total mud conditioner that stabilizes shale formations, significantly increases lubricity, lowers high temperature high pressure fluid loss (HTHP) water loss and enhances filter cake properties in both oil and water based drilling fluids. It adhere to the surfaces of drill cuttings and effectively seal their surfaces and inhibit their reaction with the drilling fluid, minimizing sticking, swelling, and sloughing, and increasing borehole stability.

Each bidder should invariably mention the exact value of the properties of their quoted product along with detailed chemical composition. Only to write "conforming to" or "OK" will not be sufficient.

A) TECHNICAL SPECIFICATIONS:

| SR. NO. | PHYSICAL PROPERTIES | REQUIRED SPECIFICATIONS | EXACT VALUE OF THE OFFERED PRODUCT |
|---------|---|--|------------------------------------|
| 1. | Appearance | Black powder free from dirt and any foreign material | |
| 2. | Density (g / Cm ³) | 1.25 – 1.50 | |
| 3. | Solubility (i) In Distilled water (ii) In Dimethyl Sulphoxide | 65 % (Minimum) 30 % (Minimum) | |
| 4. | pH of 2% (w/v) solution in distilled water at 24±2°C | 8.5 (Minimum) | |
| 5. | Moisture Content , percent by mass | 10.0 (Maximum) | |

B) PERFORMANCE TESTS:

| SR. NO. | PERFORMANCE TESTS | REQUIRED SPECIFICATIONS | EXACT VALUE OF THE OFFERED PRODUCT |
|---------|--|---|------------------------------------|
| 01 | <u>Lubricity Test:</u> Prepare a Bentonite suspension having Apparent Viscosity 15 cp, (prepared by dilution of API Bentonite, pre-hydrated @ 90±2 °C for 72 hrs) Treat the suspension with 2% (w/v) sample by stirring in Hamilton Beach Mixer at medium speed for 15 minutes. Determine the lubricity coefficient of the treated suspension on a lubricity tester. | It should not be more than 0.30. <i>T. alban</i> | <i>7.00</i> |

| | | | |
|-----|--|---|--|
| 02. | <p><u>Bentonite Inhibition Test:</u></p> <p>(a) Prepare a Bentonite suspension (blank) by stirring 7.5% (w/v) API Bentonite with distilled water in Hamilton Beach Mixer at high speed for 15 minutes. Determine its Apparent Viscosity and Yield point.</p> <p>(b) Add 3% (w/v) sulphonated Asphalt sample to distilled water and stir at high speed in Hamilton Beach Mixer for 10 minutes. To this add 7.5% (w/v) API Bentonite and stir again in Hamilton Beach Mixer at high speed for 15 minutes. Determine its Apparent Viscosity and Yield point.</p> | <p>Apparent Viscosity Should not be more than 35% of the value obtained for blank in 2(a) above. Yield point should not be more than 15% of the value obtained for blank in 2(a) above.</p> | |
|-----|--|---|--|

C) NECESSARY DATA

| SR. NO. | | DESCRIPTION | |
|---------|---|--|--|
| 01. | A | Name of Bidder | |
| | B | Name of authorized signatory of bidder | |
| | C | Complete address, telephone, e-mail and fax numbers of bidder | |
| 02. | A | Name of Local agent | |
| | B | Name of authorized signatory of local agent | |
| | C | Complete address, telephone, e-mail and fax numbers of local agent | |

| | | | |
|-----|---|---|--|
| 03. | A | Name of Manufacturer | |
| | B | Name of Authorized Signatory of Manufacturer | |
| | C | Complete address, telephone, e-mail and fax number of manufacturer. | |
| | D | Website of manufacturer | |
| 04. | | Brand Name of Product | |
| 05. | | Country of origin | |
| 06. | | Port of shipment | |
| 07. | | Minimum shelf life of product | |

- D) Names of at least 07 clients / sales achievement (E & P companies only) other than OGDCL whom supplied the quoted product in bulk quantity (not less than 50 M.Ton) **with contract numbers and quantities during the last Five(05) years commencing from year 2013** as a proof of Five (05) years experience.

| SR. NO. | NAMES OF CLIENTS WITH ADDRESS AND TELEPHONE NOS. | CONTRACT / PURCHASE ORDER NOS. WITH DATE | QUANTITY SUPPLIED (M.TON) |
|---------|--|--|---------------------------|
| 01. | | | |
| 02. | | | |
| 03. | | | |
| 04. | | | |
| 05. | | | |
| 06. | | | |
| 07. | | | |

E) NECESSARY ATTACHMENTS FOR TECHNICAL BID:

5/7

| SR. NO. | DESCRIPTION | ATTACHED/ PROVIDED OR NOT. |
|---------|---|----------------------------|
| 01. | Product Data Memorandums in original printed by manufacturer. | Attached/ Not attached |
| 02. | Material Safety Data Sheets in original printed by manufacturer. | Attached/ Not attached |
| 03. | Valid ISO-9001-2008 certificate for manufacturing / Production of the quoted product / Mud chemicals. | Attached/ Not attached |
| 04. | Original authority letter issued by the manufacturer to bidder for quoting their product. | Attached/ Not attached |
| 05. | Company profile with manufacturing capability & Experience of last 05 years. | Attached/ Not attached |
| 06. | Lab evaluation report of the quoted product from an internationally reputed third party laboratory in the light of technical specifications sheet at A) & Performance Test at B). | Attached/ Not attached. |
| 07 | 1 kg sample of offered product | Provided/ Not provided |

PACKAGING:

The chemical should be packed as **25 kgs** 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 **01 M.Ton**, 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._____.