GUAR GUM

VISCOSIFIER

INVS 2000 – PRODUCT DATA SHEET [1/2]

INDUSUN FLUIDS
INDUSUN DRILLING FLUIDS PVT. LTD.

Description

Guar Gum is a naturally occurring high viscosity polymer used in both salt water and fresh water muds. It is derived from the seed of the guar plant and is a polysaccharide polymer.

Application

Guar Gum has the ability to form viscous colloid solutions when hydrated in cold water systems. It provides viscosity and is useful for offshore drilling as it can be directly added to the sea water. However, Guar Gum has a temperature limitation of 67°C

Advantages

- Controls fluid loss
- Provides viscosity to drilling fluids
- Adjusts rheological properties
- Widely available and is an economical source polymer Viscosifier

Specifications – Guar Gum for Well Simulation

S.No.	Parameter	Grade I	Grade II	Grade III
1	Physical State	Free flowing powder, free from visible impurities		
2	Dispersibility *In 3% (w/v) KCl brine in freshly boiled and cooled distilled water at 24±2°C for 45 Minutes*	Highly Dispersible		
3	Moisture content at 105±2°C, percent by mass	10 (Max)	5 (Max)	10 (Max)
4	Residue content on dry basis, percent by mass	1.0 (Max)	4.0 (Max)	6.0 (Max)
5	Test for complex gel formation	Positive @ pH 4 – 6	Positive @ pH 8 – 10	Positive @ pH 8 – 10
6	Viscosity *of (511 sec-1 shear rate) Gel (0.7/ 0.6/ 0.9 % Gd. I/ II/ III) in 3 % KCl solution) after 45 minutes stirring at 24±2 °C, cP*	50 (Min)	55 (Min)	55 (Min)
7	Viscosity *of (511 sec-1 shear rate) Gel (as at S.no.6) after ageing for 48 hrs. at 40 ± 2°C*	45 (Min)	45 (Min)	50 (Min)
8	Viscosity *of (511 sec-1 shear rate) Gel (as at S.no.6) after ageing for 4 hrs. at 90 ± 2°C*	15 (Min)	20 (Min)	20 (Min)
9	Viscosity *of (511 sec-1 shear rate) Complexed Gel (as at S.no.6) containing 0.1g Ammonium Persulphate per litre Gel after ageing for 4 hrs. at 90 ± 2°C*	5 (Max)	5 (Max)	5 (Max)
10	Ash Content on dry basis, percent by mass	1.5 (Max)	1.0 (Max)	1.5 (Max)

Specifications – Guar Gum for Drilling

S.No.	Parameter	Specification
1	Physical State	Free flowing powder, free from visible impurities
2	Moisture content at 105±2°C, percent by mass	15 (Maximum)
3	pH of 1% (w/v) Solution of the Material in distilled water	6.5 – 7.5
4	Dispersibility in Bentonite Suspension: *Residue left on the 60 Mesh BSS or equivalent sieve*	Will not exceed 2.5% with respect to the weight of the sample added.
5	Apparent Viscosity *of 1.0% (w/v) Sample suspension at 24±2°C in distilled water, cP*	65 (Minimum)
6	Apparent Viscosity *of 1.0% (w/v) Sample suspension at 24±2°C in synthetic sea water, cP*	65 (Minimum)
7	Apparent Viscosity *of 1.0% (w/v) Sample suspension at 24±2°C in saturated salt water, cP*	75 (Minimum)
8	Apparent Viscosity *of 1.0% (w/v) Sample in 5 % (w/v) CaCO3 (pH 9.8 – 10.0) at 24±2ºC, cP*	65 (Minimum)

Packaging

25 Kgs pre ply kraft paper bag. Customized packaging is available on request.