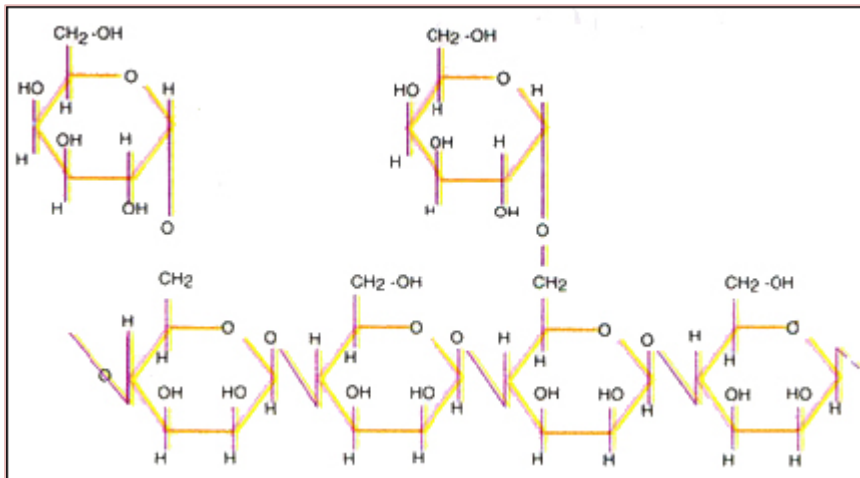


PRODUCT INFORMATION RADHAGEL MD

Botanical Name: Cyamopsis tetragonolobus,
Family: Leguminous
Part Used: Seeds
Vernacular Name: Guar

CHEMICAL STRUCTURE FOR GUAR GUM



Product Description

RADHAGEL MD is free flowing nontoxic powder has a thickening property so it will used as versifier in all types of water based drilling fluid system. RADHAGEL MD is a biodegradable polymer.

Physical Properties	
Appearance	Cream colored free flowing powder
Bulk Density	55 lbs/ft ³ (880 kg/M ³)
P.H. 1% solution	5.5 to 7.5
Moisture	8 to 10% (Max)
Toxicity	Non-Toxic
Protein	±6%
Ash	<1.90%

Viscosity of 1% solution (Staring HBM at high speed for 15 Minutes) on Fann VG Meter

Viscosity at 24 ±2°C

$$600/300 = 153/130$$

$$AV = 76.5$$

After 10 Minutes 600/300 = 153/130

$$AV = 77$$

After 15 Minutes 600/300 = 153/130

$$AV = 77$$

After 30 Minutes 600/300 = 153/130

$$AV = 77$$

After 1 Hour 600/300 = 153/130

$$AV = 77$$

After 2 Hours 600/300 = 153/130

$$AV = 77$$

After 24 Hours 600/300 = 107/83

$$AV = 53.5$$

Oil well drilling

Guar gum as a water-soluble polymer has found a broad range of application in the production of petroleum. It serve one or more functions, such as water- loss control, Viscosity control. Flocculation, Suspension, Turbulent friction Reduction or Mobility control.



Function

RADHAGEL MD when use in oil well drilling mud, gives a better colloid thereby reducing water losses. It regulates the viscosity of mud solution, Stabilizes and regulates the flow properties of the drilling mud, It is widely use on oil well drilling due to it's malty functions such as water loss control, viscosity control, friction reduction, lubricant and cooling of of the drill bits, In MD explosive Guar improve s resistance to water aging in explosive gels. **RADHAGEL MD** when used with transition metal ions, increases viscosity. It also work as a thickening agent in blasting slurry and for MD explosive.

FEATURES AND BEFENITES

The principal use of **RADHAGEL MD** is for drilling of large diameter holes. As a nature hydrocolloid, **RADHAGEL MD** provides full flow properties, both yield point and viscosity. Its ideal for use in various other applications, e.g. Coring and Construction site operations. The nonionic nature of the product permits' high stability in the presence of anhydrate, cement, mono and bivalent salts. Further, **RADHAGEL MD** is highly resistant to bacteria and oxidative degradation, thus can be used as an effective Viscocifier in spud mud, work over and completion fluids for low temperature reservoirs. **RADHAGEL MD** minimizes utilization of Bentonite, particularly in surface hole drilling. **RADHAGEL MD** is very effective in building viscous "Pills" to clean the annulus in large diameter holes. **RADHAGEL MD** is primarily utilized to provide high viscosity for superior hole cleaning at a minimal cost.

TREATMENT

RADHAGEL MD is normally added in concentrations of 2.5 – 3.5 lbs/bbl (7.2 – 10 kg/m³) as needed to increases viscosity to desired level. No addition of NaOH (Caustic Soda) should be made. **RADHAGEL MD** is rapidly soluble in fresh/sea/salt and complex brine system.

SAFETY PRECAUTIONS

RADHAGEL MD is nontoxic, no special safety precautions have to be observed. Utilize normal precautions for employee protection when handling chemical products. Any spilled products should be swept up immediately since contact with water results in a slippery film.

PACKING

RADHAGEL MD is packed 25 kgs paper/HDPE sacks with polyliner.

NOT: Specification Can Be Altered As Per Customers Requirement.

AASHNA INTERNATIONAL

Kumud Sheravia
Director.