



TECHNICAL DATA SHEET

GUAR GUM POWDERS

PRODUCT DESCRIPTION: Carboxymethyl Hydroxypropyl Guar Gum (CMHPG) and Fast Hydrating Guar Gum (FHG)

Harland International's Fast Hydrating and Carboxymethyl Hydroxypropyl Guar Gums are high purity, non-ionic guar gum that can be used in well stimulation (fracking) or drilling fluids. Harland International prides itself on only supplying the highest grades of guar gums with viscosities. Typical FHG is minimum 40-45 and 41-47 cps (40# system, 1500 rpm for 150 seconds) and 8000 and 8500 cps (Brookfield) CMHPG.

FEATURES

- FHG: 40-45 & 41-47 cps @ 40#'s
- Low fines levels, <1%
- Excellent carrying capacity
- Can be used with other additives, such as organo-clays.
- Can be dispersed at high temperatures (100°F)
- CMHPG: 8000 & 8500 cps (Brookfield)
- Can be cross-linked with metal ions at low pH
- Low Moisture Content, <10%
- Marginally affected by high concentrations of monovalent salts.
- Dispersible at high concentrations, up to 1.8%.

APPLICATION

The product usage is dependent on the specifics of the application but is usually in the range of 0.24% to 0.96% by weight. Ending viscosity and time to develop this viscosity are determined by solution temperature and the amount of mechanical shear. Other additives are compatible with the HPGG. Biological degradation by aerobic and/or sulfate reducing bacteria can be prevented by the use of biocides. Depolymerization of the guar can be accomplished with the use of oxidizers such as persulfates or the use of enzymes such as hemicellulose.

TYPICAL PHYSICAL PROPERTIES

➤ Appearance.....	Powder
➤ Color.....	Off-White to Yellow
➤ Fines.....	<1%
➤ Viscosity, Diluted.....	40-45 (40# FHG); 8000, 8500 (Brookfield, CMHPG)
➤ Solubility.....	Soluble in hot and cold water, brines
➤ pH.....	6.5-7.5
➤ Bulk density, lb/ft ³	45-49 (loose), 47-51 (packed)
➤ Shelf Life.....	~18 Months
➤ Moisture.....	<10%

PACKAGING

Guar Gum is shipped from the manufacturing facility and regional distribution centers in standard 800 Kg bags. Custom packaging is available upon request. Bulk quantities are available.

TOMORROW'S TECHNOLOGY TODAY