

Product Data Sheet

Hydroxypropyl Guar (HPG)

Description

Description	Hydroxypropyl Guar (HPG) is a chemically modified guar gum derivative produced by reacting native guar gum with propylene oxide to introduce hydroxypropyl ether substitution. This modification significantly improves thermal stability compared to native guar gum, making HPG the preferred viscosifier for high-temperature oilfield fracturing and completion fluids, alongside use in select cosmetic formulations.
Applications	High-temperature hydraulic fracturing fluid viscosifier Oilfield completion fluids requiring thermal stability Cosmetic and personal care formulation (select applications)
Grade	Standard Industrial Grade
CAS No.	39421-75-5

Key Benefits

1. Significantly improved thermal stability versus native guar gum, suited to high-temperature well environments
2. Consistent, controlled molar substitution supporting predictable viscosity performance
3. Retains guar gum's biodegradability advantage over fully synthetic polymer alternatives
4. Established, actively traded derivative with growing demand in higher-value oilfield applications

Chemical Analysis & Physical Data

Typical Specification

Parameter	Test Method	Unit	Specification
Molar Substitution (Hydroxypropyl)	Standard MS Determination Method	–	0.4 – 0.6
Viscosity (1% Solution, Brookfield)	Viscometer Method	cps	Min. 3,000 – 4,000
Thermal Stability	Standard High- Temperature Viscosity Test	°C	Stable to $\approx$ 150 – 200+ (grade dependent)
Moisture	Oven-Drying Method	wt%	Max. 10.0
pH (1% Solution)	pH Meter	–	5.5 – 8.0
Appearance	Visual	–	Off-white powder

Packaging

Packaging 25 kg Kraft Paper Bags (PE-lined)
500 kg / 1,000 kg Jumbo Bags (FIBC)
Custom packaging available on request.

Storage & Handling

1. Store in a cool, dry, well-ventilated warehouse away from moisture
2. Keep bags sealed until point of use to prevent moisture pickup
3. Stack on pallets, away from direct ground contact
4. Use appropriate PPE (dust mask, goggles) when handling – avoid dust generation

Quality Assurance

1. Every batch is tested against the specification above before dispatch

2. A batch-specific Certificate of Analysis (COA) accompanies each shipment, reporting molar substitution, viscosity and thermal stability against this TDS
3. COA available on request prior to shipment for buyer pre-approval
4. Third-party inspection (SGS/Intertek) can be arranged on request for regulated-market shipments

Disclaimer: The information provided in this document is based on our current knowledge and is intended as a general guide. Ochnology Solution Pvt. Ltd. reserves the right to modify specifications without prior notice. Buyers are advised to conduct their own testing for specific applications. A batch-specific Certificate of Analysis (COA) is available on request for each shipment.