

Product Information

Edicol® Food Grade Guar Gums

Lucid Colloids Limited based in India is a premier manufacturer of **Edicol®** range of Guar Gums since 1958 for various applications such as food, pet-food, pharmaceuticals, personal and home care, oil & gas, paper, explosives, mining, textiles and a host of other applications.



Agri Farm and Research Station. The Head Office is in Mumbai, India. Lucid has a subsidiary company incorporated in the USA as **Lucid Colloids America Inc.** and another in the Netherlands as **Lucid Colloids Europe B.V.**

Lucid has a rich 65 year legacy in the business and a collective experience of over 500 man-years at senior management level in the industry. Lucid has 3 Plants located at Jodhpur, Meglasiya and Jhagadia in India. Agri Field Research for Guar and Arid Zones crops is carried out on a 40 acre Guar



Lucid is ISO 9001, ISO 14001, ISO 45001, FSSC 22000 (GFSI equivalent), BRCGS (A+), cGMP, EFCI GMP, SA 8000, SEDEX (SMETA 4-Pillar), Vegan, Non-GMO, Kosher, Halal and Organic certified. Lucid has adopted best global practices of governance, safety, environment and social standards.

Lucid currently has 350 global employees and is a leading supplier of Guar Gum to the food,

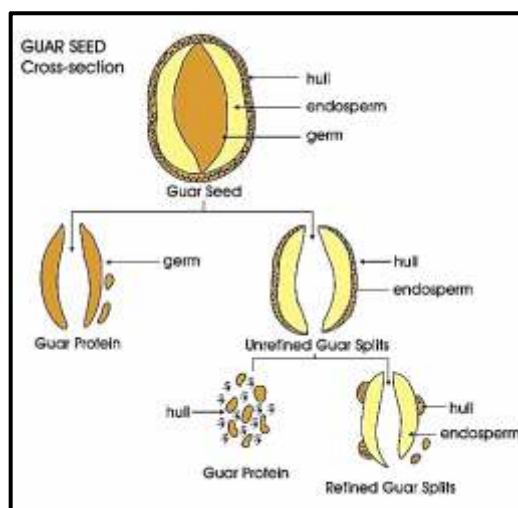
feed, pharma and nutraceutical sectors.

Lucid's Edicol® brand of Food Grade Guar Gums are marketed in over 30 countries. Lucid's strength lies in its capabilities to offer a **wide range of Edicol® Guar Gums as well as customised products.**



Products range from Ultra Low viscosity of

1,200 cps for a 10% solution to Ultra High viscosity of 7,000 cps for a 1% solution, in a variety of particle sizes and hydration rates. **Edicol®** Food Grade Guar Gums are natural, vegan, non-GMO and plant based, extracted from Indian Guar Beans.

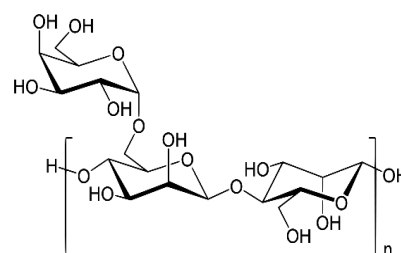


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FAO/WHO Codex Alimentarius - Food Status: A1, ADI: Not Specified. European Community - Food Status: E412. Food Chemical Codex - Food Status: Direct Food Additive. Guar gum that meets FCC specifications is affirmed as GRAS as a direct food additive under FDA regulation 184.1339. FEMA/GRAS No: 2537. CAS No: 9000-30-0

Edicol® Guar Gum is a white - cream coloured powder, extracted from the endosperm of natural Guar beans, "*Cyamopsis Tetragonalobus*". It is a hot and cold water soluble Galactomannan Polysaccharide characterised by a Beta 1,4 linear mannose backbone chain with a single alpha 1,6 galactose side unit on approximately every alternate mannose unit. It has high viscosities at low concentrations and exhibits non-Newtonian, pseudo-plastic rheology. Guar Gum viscosities increase exponentially with increasing concentrations in water and its estimated Molecular Weight is between 100 ~ 2000 kilo Daltons.



PRODUCT RANGE

Viscosity		Particle Size			
Viscosity Type	Typical Viscosity (#)	Fine	Med. Coarse	Coarse	Very Coarse
		90% < 200 mesh (75μ)	60% < 200 mesh (75μ) and 20% > 100 mesh (150μ)	30% < 200 mesh (75μ) and 20% > 100 mesh (150μ)	70% > 60 mesh (250μ)
		Finer <----- Particle Size -----> Coarser			
		Faster <----- Hydration Rate -----> Slower			
		Difficult <----- Dispersibility -----> Easier			
Higher <-----> Lower	Ultra High	7000	110-70		
	Very High	6500	100-70, 90-70	100-60, 90-60	100-50, 100-30, 90-50, 90-30
	High-High	6000	80-70	80-60	80-55, 80-50, 80-30
	Medium-High	5500	70-70	70-60	70-50, 70-30
	Low-High	5000	60-70	60-60	60-50, 60-35, 60-30
	High-Medium	4000	40-70	40-60	40-50, 40-30
	Medium-Medium	3000	30-70	30-60	30-50, 30-40
	Low-Medium	2000	20-70	20-60	20-20
	High-Low	1000	ULV 1000		
	Medium-Low	450 - 750	ULV 750, ULV 500		
Lower <-----> Higher	Low-Low	40 - 200	ULV 200, ULV 100, ULV 50		
	Ultra Low	<1500 cps @ 4% - 10% concentration	DPG-1, 2, 3, 4		
		Edicol® Grade Nos			

(#) = Typical 1% Brookfield Viscosity, cps (mPas), 2 hrs, 25° C.

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