



Performance Polymers for Personal Care products

Catcol® is a range of performance polymers for personal care products.

Catcol® is manufactured at Lucid's manufacturing site at Jodhpur, Rajasthan and is available ex-stock in India.



Catcol® products are chemically modified derivatives of a polysaccharide galactomannan. They impart specific performance functions in personal care products such as Hair and Skin care, Cleansing and Bathing products.

Catcol® products are very useful for the following benefits in personal care products:

- ✓ Conditioning
- ✓ Thickening
- ✓ Richness
- ✓ Lubricity
- ✓ Foam stability



The high molecular weight and the hot and cold water solubility of **Catcol®** leads to viscosity and thickening through the aqueous phase in the formulation. The derivations and chemical modifications are carried out on Guar Gum, a naturally occurring polysaccharide galactomannan, composed mainly of a mannose backbone and galactose side units. The derivation is done by reacting with:



- a. an alkylene oxide to get 2-hydroxypropyl ether of Guar Gum, (Nonionic) or
- b. a quaternary ammonium compound to get Guar Gum 2-hydroxy-3-trimethylammoniopropyl ether, chloride, (Cationic) or
- c. an alkylene oxide and a quaternary ammonium compound to get the double derivative Guar Gum 2-hydroxypropyl-2-hydroxy-3-trimethylammoniopropyl ether, chloride (Cationic).

Catcol® grades are available as non-ionic (HPG), cationic (GPHT) and double derivatives as nonionic-cationic (GHPTHPG). **Catcol®** products are then further chemically / physically modified to achieve the desired dispersion, hydration and other specific properties. **Catcol®** products impart excellent conditioning and other desirable properties to personal care products. Though cationic, these products are compatible with most anionic and amphoteric surfactants used in shampoos, conditioners, body washes and liquid hand soaps.



Catcol[®] Guar Gums for Personal Care

When used at usage levels of 0.2% - 1.5%, **Catcol[®]** products provide the following performance benefits in hair care products such as shampoos, conditioners and 2-in-1 shampoos:

- ✓ Wet combability
- ✓ Dry combability
- ✓ Static reduction
- ✓ Conditioning (without buildup)
- ✓ Viscosity control
- ✓ Non-Newtonian, pseudoplastic flow
- ✓ Emulsion stability
- ✓ Pearl suspension

Cationic **Catcol[®]** products provide the following performance benefits in shaving preparations, body washes and liquid hand soaps:

- ✓ Lubrication
- ✓ Soft, luxurious after-feel
- ✓ Moisturiser effect

Nonionic **Catcol[®]** products have the following properties and impart performance to personal care products when used at usage levels of 0.5% - 2.0%:

- ✓ Film former
- ✓ High level of lubricity
- ✓ Richness
- ✓ Foam stability
- ✓ Excellent salt tolerance
- ✓ Excellent Alcohol tolerance

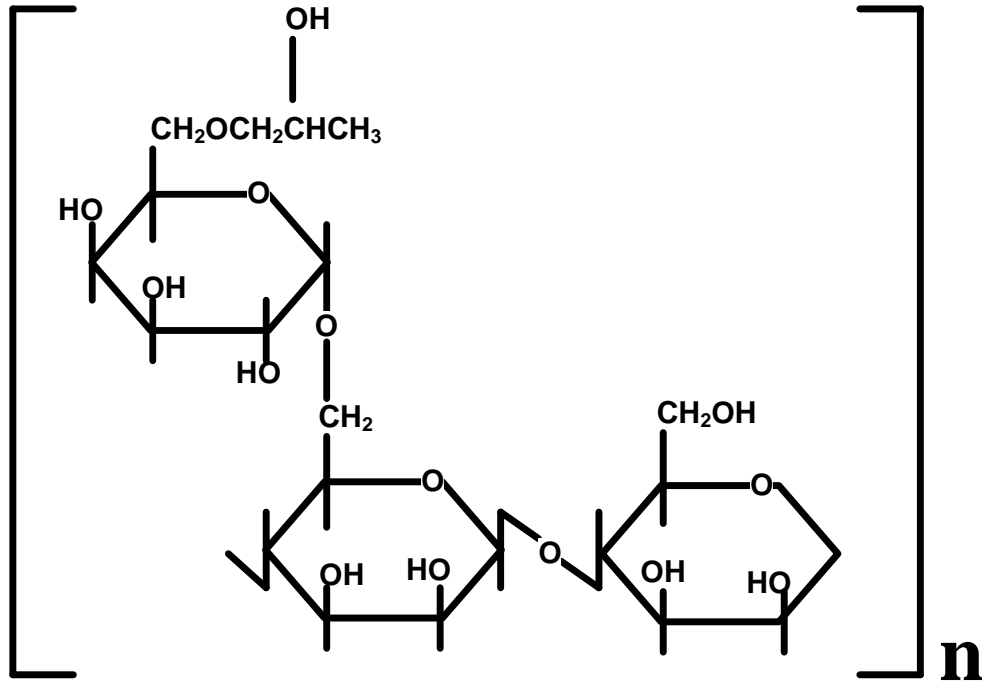
Catcol[®] products are available in a variety of grades to suit most applications:

Catcol[®] products are recommended for the following range of applications:

- Shampoo + Conditioner
- Conditioner
- Styling Mousse
- Bubble Bath
- Liquid Hand Soap
- Skin Care – oil-in-water emulsions
- Aqueous based Topical Gels and Ointments
- Shaving Gels
- Body Wash
- Wet Wipes Adults and Babies

2-hydroxypropyl ether of Guar Gum

Common name: Hydroxypropyl Guar

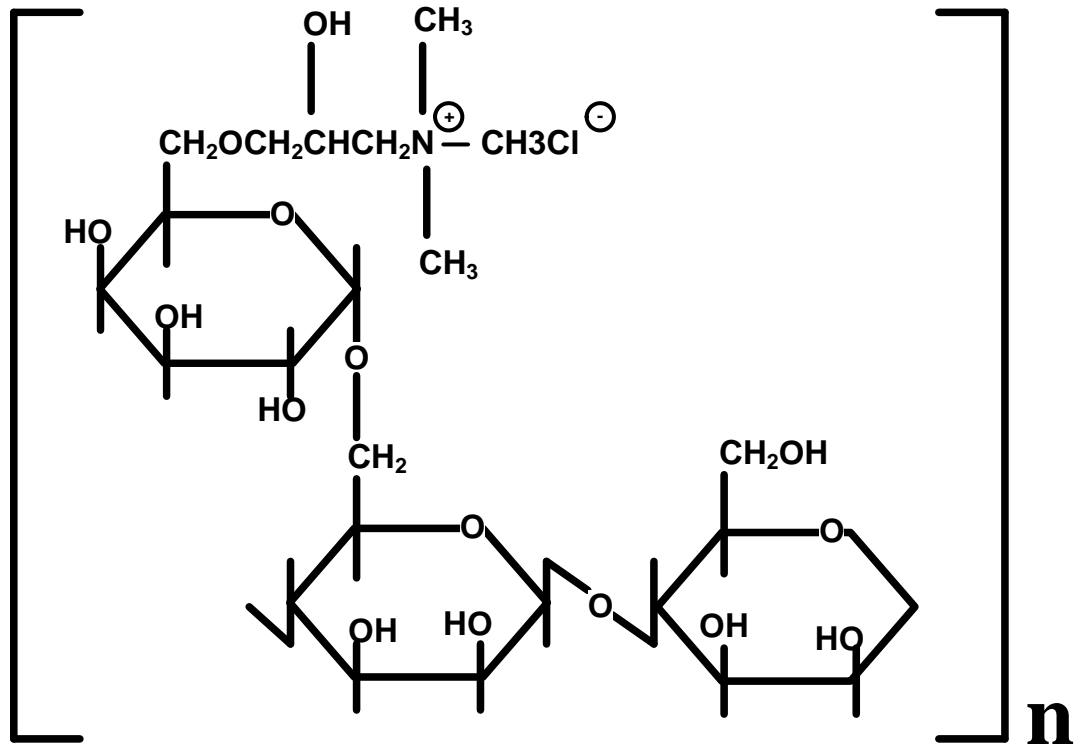


Properties:

CAS No	39421-75-5
Form	Light ivory to yellow fine powder
Particle size	100% < thru 100 US ASTM Mesh (150 μ)
Indicative viscosity, 1% in water, Brookfield	2500 cps – 3500 cps
Rheology	Non-Newtonian, pseudoplastic
Ash	Maximum 4%
Moisture	Maximum 10%
Ionic charge	Non-ionic
Total Plate Count/g	500 maximum
Molds & Yeast/g	100 maximum
E.coli/10 gms	Absent
Salmonella/25 gms	Absent

Guar Gum 2-hydroxy-3-trimethylammonioethyl ether, chloride

Common Name: Guar hydroxypropyltrimonium chloride



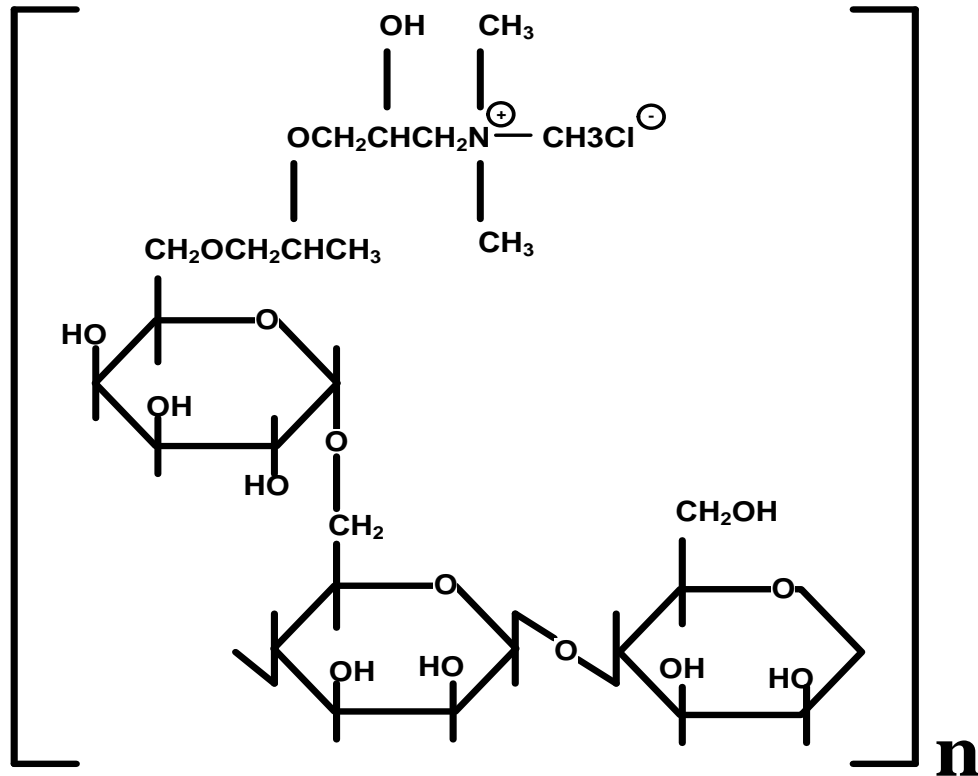
Properties:

CAS No	65497-29-2
Form	Light ivory to yellow fine powder
Particle size	100% < thru 100 US ASTM Mesh (150 μ)
Indicative viscosity, 1% in water, Brookfield	2500 cps – 3500 cps
Rheology	Non-Newtonian, pseudoplastic
Ash	Maximum 5%
Moisture	Maximum 10%
Ionic Charge	Cationic
Nitrogen	1.1% – 1.3%
Total Plate Count/g	500 maximum
Molds & Yeast/g	100 maximum
E.coli/10 gms	Absent
Salmonella/25 gms	Absent



Guar Gum, 2-hydroxypropyl-2-hydroxy-3-trimethylammonioethyl ether, chloride.

Common Name: Guar Hydroxypropyltrimonium chloride hydroxypropyl



Properties:

CAS No	71329-50-5
Form	Light ivory to yello fine powder
Particle size	100% < 100 US ASTM Mesh (150 μ)
Indicative viscosity, 1% in water, Brookfield	1500 cps – 2500 cps
Rheology	Non-Newtonian, pseudoplastic
Ash	Maximum 5%
Moisture	Maximum 10%
Ionic Charge	Cationic
Nitrogen	0.9% – 1.1%
Total Plate Count/g	500 maximum
Molds & Yeast/g	100 maximum
E.coli/10 gms	Absent
Salmonella/25 gms	Absent

**Packing:**

This product is available in 25 kgs bags with a suitable liner.

Storage:

Store product in a dry and cool place, away from heat and out of the sun. Once package is opened, consume within reasonable time. Store opened and unused packages after adequate re-sealing to avoid moisture ingress. Shelf life is 12 months from date of manufacture of unopened bags and if stored under recommended conditions.

Safety, Health, Environment and Handling:

See Material Safety Data Sheet. This product may contain preservatives to enhance dry and solution shelf-life.