Jungbunzlauer

Product Information

Xanthan Gum CS-PC

Personal care grade clear solution xanthan gum

General Information

Xanthan gum is a natural occurring high-molecular weight polysaccharide and is produced by fermentation from *Xanthomonas campestris*. It is soluble in cold and hot water and forms highly viscous, pseudoplastic solutions. Its unique combination of physical and chemical properties makes it an excellent thickener and stabilizer for personal care products, such as lotions, creams, shower gels, shampoos, shaving foams, face masks and make-up.

Jungbunzlauer xanthan gum CS-PC is a clear solution grade that is ideal for transparent or very clear products. It can be used for a wide range of personal care applications, where it provides various advantageous properties. Xanthan gum exhibits superior shear-thinning behavior compared to any other commercial hydrocolloid. Major advantages of xanthan gum is that it improves texture, gives a pleasant skin feel to the product, while stabilizing suspensions, emulsions and foams. It is compatible and stable in solutions with a high salt concentration, yet is also stable in acid or alkaline solutions and is resistant to enzymatic degradation. In addition Jungbunzlauer xanthan gum CS-PC is free of enzymatic activities such as amylases and cellulases, making it compatible in combinations with starch and celluloses.

Jungbunzlauer offers xanthan gum CS-PC in two particle sizes: Xanthan Gum FNCS-PC (normal, 80 mesh) and Xanthan Gum FFCS-PC (fine, 200 mesh)

For transparent personal care applications that require reduced shear-thinning properties Jungbunzlauer recommends using our type with reduced pseudoplasticity FNCSP-PC or FFCSP-PC.

Features and benefits

- provides a clear (transparent) solution
- highly pseudoplastic rheological properties (i.e. is shear thinning)
- imparts high solution viscosity even at low concentrations
- exhibits low viscosity during processing but fully recovers viscosity after shearing
- hydrates entirely in aqueous media
- non-thixotropic flow behavior
- excellent suspending and stabilizing properties for suspensions, emulsions and foams.
- soluble in both cold and hot water
- synergistic interaction with galactomannans, such as guar, locust bean and tara gum

Compatibility

- compatible with practically all commercially available thickeners and stabilizers
- stable over a wide range of pH and temperatures
- compatible with and stable in systems containing high concentrations of humectants, surfactants and salt
- resistant to enzymatic degradation
- compatible with up to 50% aqueous solutions of organic solvents

Legal Aspects

Jungbunzlauer Personal Care grade xanthan gum is supplied in accordance with regulation 1223/2009/EC. None of the substances listed in Annex II and III of the regulation are present in our product.

In the United States personal care products are regulated by the Federal Food, Drug, and Cosmetic Act (FD & C Act). Xanthan gum is approved by the U.S. Food and Drug Administration (FDA) for use as a food additive (21CFR172.695) and therefore accepted as safe for personal care products.

Personal Care grade xanthan gum has not been tested or re-tested on animals for cosmetic purposes by or on behalf of Jungbunzlauer and therefore complies with the criteria of the Humane Cosmetics Standard (HCS).

In addition, xanthan gum grades from Jungbunzlauer are manufactured without GMO and only traceable non-GMO raw materials are used. Therefore, Jungbunzlauer xanthan gum meets the requirements of the EU Eco-Regulation 834/2007/EC and is compliant with the COSMOS-standard (internationally recognized standard for organic and natural cosmetics, developed by BDIH (Germany), Bioforum (Belgium), Cosmebio and Ecocert (France), ICEA (Italy) and the Soil Association (UK).

Standard Packaging and Storage

Jungbunzlauer xanthan gum CS-PC is available in 20 kg corrugated cardboard boxes with inner polyethylene lining.

Xanthan gum CS-PC should be stored in a cool (max. 30°C) and dry (max. 70% humidity) place in closed containers. For this product Jungbunzlauer guarantees a shelf life of 3 years from the date of manufacture when stored under these conditions.

In its powder form xanthan gum CS-PC is resistant to microbial degradation. The use of a preservative is recommended when solutions of xanthan gum CS-PC are to be stored for more than 24 hours.

Transparency of JBL XG FNCS-PC

Solutions of Jungbunzlauer xanthan gum CS-PC are transparent in comparison to solutions obtained from other xanthan gum types. As illustrated in figure 1 the solutions of xanthan gum CS-PC usually reaches a transmission of 95% and more compared to a transmission of 35% for our standard grades. The very high transparency makes it an ideal hydrocolloid for thickening and stabilizing clear personal care and cosmetic formulations.

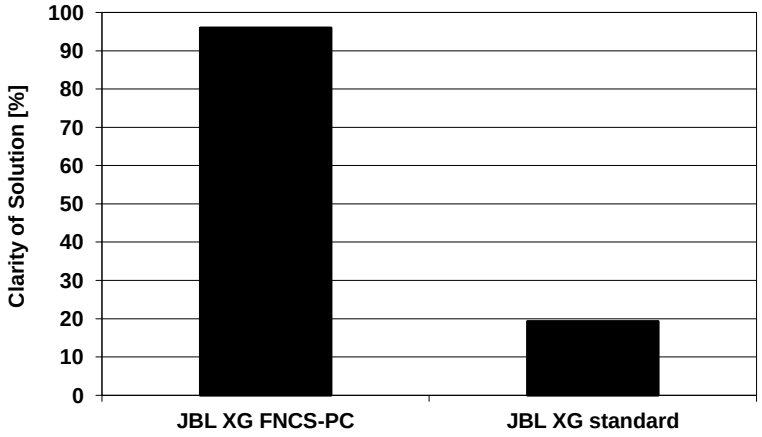

Figure 1: Comparison of turbidity of xanthan gum FNCS-PC and standard xanthan gum solutions. The turbidity of 1% xanthan gum solutions in distilled water was measured in % of the transmittance at 600 nm.

Technical Service

For further information our technical service specialists are always at your disposal. Samples, detailed specifications and application literature are available upon request.

Specification
Jungbunzlauer food grade xanthan gum is supplied in accordance with the requirements of the Food Chemical Codex (FCC), the purity criteria of the EU (E415), 21 CFR § 172.695 (USA), the JECFA guidelines, the European Pharmacopoeia (Ph. Eur.), the US Pharmacopeia (USP), and Japan's specifications and standards for food additives always in their latest versions.

Jungbunzlauer xanthan gum CS-PC:
- EC No. 234-394-2
- CAS No. 11138-66-2
- E-No. E 415

Parameters		Jungbunzlauer Limits
Granulation:		
- FNCS-PC (normal)	through 60 mesh (< 0.250 mm)	100%
	through 80 mesh (< 0.180 mm)	min. 95%
- FFCS-PC (fine)	through 80 mesh (< 0.180 mm)	100%
	through 200 mesh (< 0.075 mm)	min. 92%
Description		free flowing powder
Identification		conforms
Assay		91.0 – 108.0%
Viscosity	1% xanthan gum in 1% KCl solution Brookfield LVTD, spindle 3, 60 rpm, 25°C	1300 – 1700 mPa·s
Viscosity Ratio V1:V2		max. 1.45
Clarity of Solution	Transmittance at 600 nm	min. 85%
Loss on drying		max. 12.0%
pH (of 1% solution)		6.0 – 8.0
Isopropyl Alcohol		max. 500 mg/kg
Powder Color		min. 60
Pyruvic Acid		min. 1.5%
Ash		6.5 – 16.0%
Nitrogen		max. 1.5%
Heavy metals		max. 10 mg/kg
Arsenic		max. 2 mg/kg
Lead		max. 2 mg/kg
Mercury		max. 1 mg/kg
Cadmium		max. 1 mg/kg
Organic volatile impurities		passes USP test
Other Polysaccharides		passes Ph. Eur. Test
Cellulase Activity		negative
Amylase Activity		negative
Total Plate Count		max. 100/g
E. coli		negative/25 g
Coliforms		negative/25 g
Salmonella		negative/25 g
Pseudomonas aeruginosa		negative/g
Staphylococcus aureus		negative/g
Enterococcus faecalis		negative/g
Molds		max. 50/g
Yeasts		max. 50/g
Viable Cells of Xanthomonas campestris		negative/g

The information contained herein has been compiled carefully to the best of our knowledge. We do not accept any responsibility or liability for the information given in respect to the described product. Our product has to be applied under full and own responsibility of the user, especially in respect to any patent rights of others and any law or government regulation.