

TECHNICAL DATA SHEET

Effective date: 12.2020

Xanthan Gum

INFORMATION ON SUBSTANCE / MIXTURE

INCI	Xanthan gum
Molecular formula	(C ₃₅ -H ₄₉ -O ₂₉) _n
Manufacturing process	Xanthan gum is obtained by aerobic submerged fermentation using the bacterium <i>Xanthomonas campestris</i>, a micro-organism which is found naturally on cabbages. Produced by pure culture fermentation of a medium containing IP glucose syrup from maize as a carbohydrate source, nutrient salts and inorganic salts as nitrogen source. The precise composition of the fermentation broth is considered as proprietary information of the manufacturer and cannot be disclosed. During the production process, the xanthan gum fermentation broth is pasteurized. Subsequently, xanthan gum is precipitated with 2-propanol, washed, dried, milled and finally obtained in its highly pure form. Manufactured by fermentation of carbohydrates containing raw materials like glucose syrup from maize as well as sugar from sugar beet. The product undergoes several purification steps and is finally obtained in its highly pure form. During one purification step - the clarification - an enzyme is involved. This enzyme is obtained by fermentation from a bacterial source. We herewith confirm that the enzyme as well as the used raw materials and the production process are vegan.
Raw material category	Thickening agent and stabilizer, a rheology control agent in aqueous systems and a stabilizer for emulsions, suspensions and foams, provides clear (transparent) solutions
Description	Xanthan gum is a natural high-molecular weight polysaccharide (hydrophilic biopolymer) and due to its elastic properties it also features great stabilizing effects, which allows the suspension of solid particles

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Physical and chemical parameters

Appearance	Free flowing powder
Color	White to cream-colored
Odor	Characteristic
Assay	91,0 – 108,0 %
Viscosity 1% XG in 1% KCl-solution (60 rpm)	1300 – 1700 mPa·s
Viscosity Ratio V1:V2	Max. 1.45
pH (of 1% solution)	6,0 – 8,0 (very resistant to pH variations and is stable in both alkaline and acidic conditions)

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Particles < 1.180 mm (mesh 16)	≥ 100 %
Solubility	Soluble in both cold and hot water, has an excellent stability in the presence of acids and can be dissolved directly into many acidic solutions, not directly soluble in most organic solvents
Clarity of solution (transmittance at 600 nm)	Min. 85 %
Loss on drying	Max. 15.0 %

Impurities

Isopropyl alcohol	max. 500 mg/kg
Pyruvic acid	min. 1.5%
Ash	6.5 – 16.0%
Nitrogen	max. 1.5%
Heavy metals	max. 20 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

Biological parameters

Total Plate Count	max. 1000/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

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Molds	max. 50/g
Yeasts	max. 50/g
Viable cells of <i>Xanthomonas campestris</i>	negative/g

LEGISLATION

Certification	-
CMR substances	This product is free from substances classified as carcinogenic, mutagenic or toxic for reproduction (CMR) of category 1A, 1B or 2 under Part 3 of Annex VI to Regulation (EC) No 1272/2008
Nanomaterials	This product is not considered as a nanomaterial, and doesn't contain nanoparticles as defined by the European commission and as described in EU n°1223/2009 and 2012-232 (ANSES).
Animal testing	This product has not been tested on animals.
Vegetarian, vegan	Yes
EINECS / EC	234-394-2
CAS	11138-66-2

TRANSPORT, STORAGE and SHELF LIFE

Storage conditions	Properly closed, protected against humidity, heat and impurities.
Shelf Life	36 months under good storage conditions.

DISCLAIMER

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