

# Gum Technology

Hydrocolloids & Stabilizing Systems



# Xanthan Gum

Xanthan Gum is a polysaccharide, manufactured using a natural (microbial) fermentation process which converts corn syrup, (a carbohydrate substrate) to Xanthan Gum using the microorganism *Xanthomonas campestris*. The microbe (commonly found on green leaves such as cabbage) produces the Xanthan Gum as a protective coating which is then precipitated and ground into a powder of various mesh sizes. Xanthan Gum is widely used in the food industry to add viscosity and suspension, and to stabilize emulsions. It is also used for pharmaceutical, cosmetic and industrial applications.

Xanthan Gum is soluble in cold and hot water. It can be used at very low concentrations to provide high viscosity solutions. It is stable in a wide range of pH (2-10) and temperature variations.

Xanthan Gum solutions are also pseudoplastic and will lose viscosity instantly when high shear is applied. This property allows it to pour and pump, and makes swallowing easier.

**Thickening Agent**

**Versatile**

**Cost Effective**

**Adds Viscosity & Suspension**

**Stabilizes Emulsions**

**Kosher Certified**

Coyote Brand® Product	Mesh Size	Characteristics
Xanthan Gum 80 Mesh SR-2	80	Standard all purpose grade
Xanthan Gum 80 Mesh C	80	High viscosity
Xanthan Gum 200 Mesh SR	200	Fine mesh. Faster hydration
Xanthan Gum ED-J	60	Agglomerated - Easy Dispersible
Xanthan Gum SM	80	Smooth Flow

Xanthan Gum is capable of synergistic interactions with galactomannans (e.g. Guar, Locust Bean Gum, Fenugreek Gum) and glucomannans (e.g. Konjac). The synergistic interaction between Xanthan and Guar is widely used in the food industry. The combination of the two gums creates a cost effective higher viscosity solution with even-flowing properties, which can typically be used at lower levels than the individual components alone.

The interaction between Xanthan and Locust Bean Gum (LBG) produces strong, cohesive, thermoreversible gels with very low syneresis. Xanthan interacts with Konjac to form strong and elastic gels. Also, small amounts of Xanthan Gum help to stabilize starch solutions during storage.

Xanthan Gum inhibits syneresis and prevents fillings from being absorbed in pastries. In baked goods, it increases moisture retention and inhibits retrogradation, or staling, thus extending shelf life. It helps to stabilize frozen products through the freeze/thaw cycles by controlling ice crystal growth.



**Our Gums are Good.™**

Gum Technology  
 P.O. Box 68402  
 Tucson, Arizona 85737  
 1.877.GUM.TECH (486-8324)  
 fax: 520.888.5585  
 www.gumtech.com  
 info@gumtech.com

Xanthan blends made with Guar, Locust Bean Gum, or both, are effective stabilizers for ice cream, ice milk, sherbet, and water ices. These types of blends also enhance mouthfeel, sliceability, and create a firm body and quick flavor-release in cream cheese. Xanthan improves consistency, body and syneresis in sour cream, stabilization of low fat whipped topping, butter cream topping/filling, shakes, and low fat imitation spreads.

Xanthan is widely used to stabilize emulsions in salad dressings and dips (alone or in combination with propylene glycol alginate, Gum Arabic, or carrageenan). Xanthan's unique pseudoplasticity prevents dressings from running off salads as they reset and also allows for easy pumping during processing. Xanthan, along with LBG produces a homogeneous gelled product, effective in many applications.

Xanthan Applications	Function	Usage Levels
Baked Goods, Bakery & Pie Fillings	Increases volume and moisture retention	0.05 – 0.15%
Dressings	Suspension and thickening, pseudoemulsifier	0.15 – 0.35%
Dry Mixes	Suspension and body	0.50 – 1.00%
Frozen Foods	Syneresis control and freeze/thaw stability	0.15 – 0.50%
Retorted Products	Heat resistant. Adds viscosity and suspension	0.05 – 0.50 %
Syrups and Toppings	Viscosity, consistency, suspension & freeze/thaw stability	0.15 – 0.75%
Nutraceutical Gels	Adds texture and suspension	0.10 – 0.50 %
Nutritional Bars	Binding, water retention, increases shelf life	0.10 – 0.40 %
Nutritional Beverages	Suspension and thickening	0.05 – 0.30 %

Xanthan is on the National Organic Program (NOP) list of approved ingredients for use in "organic" and "made with organic" labeled products. Gum Technology's Coyote Brand® Xanthan Gum fully meets all specifications as outlined in the Food Chemicals Codes (CFR 172.695) and may be used safely in food and pharmaceuticals as described in the Federal Register, Pharmacopeia and Code of Federal Regulations. Coyote Brand® Xanthan Gum is Kosher certified by the Orthodox Union (OU) and the Star K.

The information and/or suggestions presented on this product are the results of the testing and observations carried out in our laboratories, and we believe them to be accurate as expressed. Because we cannot anticipate the many conditions under which this information may be used, we offer this information as a guideline only to assist our customers in the use of our products, and to help them determine the applicability of the product to their formulation(s). It is the responsibility of the customer to determine the usefulness, regulatory status and legality of our product in the customer's application and the customer assumes all responsibility for loss or damage arising from the use of our products.

Gum Technology  
P.O. Box 68402  
Tucson, Arizona 85737  
1.877.GUM.TECH (486-8324)  
fax: 520.888.5585  
www.gumtech.com  
info@gumtech.com