

# XANTHAN GUM

Used for its thickening and stabilizing effect on emulsions and suspensions, Xanthan gum forms a gel structure in water which is shear thinning. Xanthan gum may be used in combination with other modifiers, for example Guar gum, as the two combine to give greatly increased effects to a product.

Xanthan gum can be dispersed into hot or cold liquids, and many grades of gum are available. When added to water, the gum has a strong tendency to form lumps and agglomerates in the solution and as a result, a number of dispersion and hydration methods are required to overcome this and achieve a homogeneous and consistent result.



## DIFFICULTIES MIXING XANTHAN GUM

- Formation of agglomerates - standard agitators don't produce enough shear to break these down.
- Difficult to obtain full yield.
- High levels of gum which compensates poor yield.
- Once viscosity increase has started, agitation of the solution and powder dispersion becomes increasingly difficult.
- Long mixing times are required to complete dispersion/hydration which can degrade the gel.
- Premixing powders the gums adds to the process time and costs.

## THE MIXQUIP HIGH SHEAR SOLUTION

Mixquip high-shear agitators are able to produce full hydration of the Xanthan gum and agglomerate-free dispersions

1. The vessel is charged with liquid and the mixer is started. The Xanthan gum is added to the water as rapidly as possible. The high speed rotation of the workhead creates a powerful vortex, drawing the powder and liquid down into the workhead.
2. The materials are then forced through the slots in the side of the workhead and projected back into the body of the mix. Any agglomerates are broken down as they pass through the slots.
3. The vigorous movement in the vessel ensures that in a short mixing cycle all the material passes many times through the workhead, progressively reducing the particle size and exposing an increasing surface area to the surrounding liquid. This rapidly completes hydration.

## APPLICATIONS



SAUCES & DRESSINGS



MILK PRODUCTS



SWEETS



VARNISH & POLISHES

## ADVANTAGES

- Agglomerate-free solution achieved
- Maximized yield, allowing for products to be formed with reduced gum content, reducing raw material costs.
- Operator error is effectively eliminated.
- Quick mixing times, speeding up operations
- Consistency achieved in product quality on every batch.
- Pre-mixing of the gum is no longer required.