

## FLOJEL™ 60

**Description:** Modified food starch refined from regular maize

**Appearance:** Fine white/creamy powder

Features	Benefits
Low hot viscosity	Allows processing and depositing of the starch/sugar dispersions/solutions at high concentrations close to final solids which reduces drying time. Reduces tendency for tailing during depositing.
Easy to cook	Offers process tolerance as it can be used in most commonly used cooking systems. (Kettle cook, direct or indirect pressure cookers). Can be cooked under atmospheric conditions as long as the solids levels are not too high.
High gel strength	Develops fast setting gels with typical confectionery gum textures and good flavour release. Can reduce the use of other gelling agents.
Good compatibility with other hydrocolloids	Synergies with other hydrocolloids such as gelatine or pectin. Offers potential for texture differentiation and allows significant cost savings.
Insoluble in cold water	Good dispersion characteristics and therefore easy to use. Can be dispersed without lumping as long as it is not added to hot solutions.
Develops gels which are not thermoreversible	Offers improved heat resistance of the confectionery gels to higher temperatures in warmer climates.
Has excellent structuring properties	FLOJEL 60 can help to improve textural and sensory attributes of confectionery products.

### APPLICATION AND USAGE INFORMATION

**Application Summary:**

FLOJEL 60 is a modified cook-up starch, which was developed specifically for the sugar confectionery industry. The type of modification adjusts the rheological properties of the starch to make it more suitable for use in high solids processing. When cooking FLOJEL 60, for example at 10% concentration, the starch solution will still have a very low hot viscosity. This allows the sugar confectioner to process his formulation close to final solids, which reduces drying times. The degree of modification also controls the final gel strength. Upon cooling a cooked FLOJEL 60 solution, the starch molecules will start to retrograde quickly and build a 3-dimensional network, resulting in a firm gel. Most sugar confectionery products are high solids gels. Depending on starch concentration, final solids and starch interactions with other ingredients, a full range of gelled textures can be achieved from soft to hard & from quickmelting to longlasting. FLOJEL 60 is bland in flavour and the starch gels based on FLOJEL 60 have a good flavour release. FLOJEL 60 is suitable for a wide range of sugar confectionery products.

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**Typical applications include:**

All types of wine gums, jelly beans, liquorice and other typical sugar confectionery products. For confectionery hard gums PURITY GUM 40 and the CRYSTAL TEX range of products should be evaluated.

**Usage Information:**

Typical sugar confectionery formulations like wine gums, liquorice etc. would contain approx. 7 to 14% FLOJEL 60, depending whether it is a starch only formulation or a combination with other hydrocolloids such as gelatine or pectin. As FLOJEL 60 is a cook-up starch, it will disperse easily in cold water or cold sugar solutions. Under acid conditions it will cook out easier. Gels based on FLOJEL 60 are not shear-resistant and show limited thermoreversibility. It is, therefore, recommended to deposit cooked sugar solutions containing FLOJEL 60 at temperatures above the gel point of that solution.

**Label declaration recommendation:** Modified Starch

**EU Classification:** Food Ingredient

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