

## PRODUCT INFORMATION DATA SHEET

# LIBCLEAR - I

(High Performance Sorbitol Based Clarifier)

### 1. INTRODUCTION :

Libclear - I is a high performance sorbitol based clarifier that reduces haze and enhances the clarity of polypropylene through nucleation of the polymer. This also leads to enhanced stiffness of the molded part and to shorter cycle time during the molding process.

### 2. FEATURES / BENEFITS :

Libclear - I is used for producing high clarity polypropylene. The product acts as clarifying agent, by creating a large number of small size spherulites ( $< 1 \mu\text{m}$ ) during the cooling of the polypropylene melt. These small spherulites lead to polypropylene that has greatly improved clarity and reduces haze compared to polypropylene which is not clarified. It is ideal for food contact applications.

### 3. PHYSICAL PROPERTIES :

<b>Appearance</b>	: White powder	<b>Content</b>	: $\geq 99\%$
<b>Melting Point</b>	: $248 \sim 252^\circ\text{C}$	<b>Moisture Content</b>	: $\leq 0.01\%$
<b>Bulk Density</b>	: $120 \sim 290\text{kg/m}^3$ at $20^\circ\text{C}$		

### 4. INDUSTRIAL USE :

Libclear - I is high effective clarifying agent for polypropylene homopolymer, random copolymer. Libclear - I could be blended with polypropylene powder through the dry mixing or the master batch and it gives high transparency and improves mechanical properties, heat resistance. The notified chemical will be applied in thin wall injection moulding, film sheet extrusion, blow moulding and rotational moulding.

Libclear - I helped make polypropylene more appealing to consumers and increases its usefulness through improved transparency. Leading injection molding markets include housewares, storage cases, living hinge cases, thin-wall containers and disposable syringes. Clarified polypropylene blow molded bottles are a popular choice for pharmaceuticals, spices, juices, sauces, vitamins, and baby bottles. The dosage for Homo PP, Random copolymer PP is recommended between 0.2% - 0.3%.

# Applying Guide of Libclear - I

## 1. APPLICATION RANGE :

Libclear - I is mainly applied for the random copolymer and homopolymer polypropylene and polyethylene.

## 2. DOSAGE :

The dosage of Libclear - I applied for PP is 0.15%--0.3%. Generally, the dosage of 0.25% can get the ideal clarity. The dosage is related with material and thickness of the finished product. Clients can adjust the dosage as per the practical situation.

## 3. USE METHOD :

Clients can produce finished products, PP Transparent Master Batch or clarity PP by using Libclear - I after blending uniformly. Libclear - I can be added directly to PP or PE material. To get the best clarity of finished products, the following methods should be followed :

- (1) Pour certain quantity of PP bulk goods into the blender, add a little of white camphor oil, then blend uniformly.
- (2) Disperse Libclear - I to PP material, which has been wetted with white camphor oil in the blender, then mix them uniformly so that the Libclear - I can be absorbed uniformly on the surface of PP.

### Notice :

The proper dosage of white camphor oil can be added as per the Libclear - I is absorbed sufficiently on the surface of PP (More white camphor oil would affect the clarity of product.)

## 4. THE TEMPERATURE FOR USING :

The proper processing temperature range of the product is 220-270°C.

## 5. Notice :

- (1) The product can be mixed with other plastics additives, it doesn't affect the result of the finished product.
- (2) The product is easy to be humidity, please be sealed if the whole package product can not be used completely.
- (3) The product can't be stored with other dangerous chemicals.
- (4) If users have some questions during the application, please contact with us in time, we will do our best to give satisfactory reply.