



# POLYFUL

## ADVANCED MATERIAL

Hangzhou Polyful Advanced Material Co., Ltd.

杭州聚丰新材料有限公司

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## Company Profile

Hangzhou POLYFUL Advanced Material Co., Ltd. ( “POLYFUL” ) is a high-tech company specializing in the research, development, production, and sales of high-end polymer products.

Established by the founding team of a listed company, POLYFUL has launched in-depth cooperation with the national key laboratory of Zhejiang University.

Aimed at the polymer materials sector, it is focused on the development of high-performance products in 5G communications, new energy vehicles, food and healthcare, and environmental protection and biodegradation. POLYFUL is primarily engaged in high-end modified materials such as modified polyolefins and engineering plastics, as well as special polymers, including biodegradable resin and high-performance electronic chemical materials, with product quality reaching the leading level in China.

## Positioning and Strengths

Positioning: A technology-driven advanced materials company focused on high-end polymers

Strengths: R&D by university teams, support of national base, cost effectiveness, environmentally friendly, customization

## Honors and Qualifications

Since its inception in 2018, POLYFUL has won a range of honors, including China High-tech Enterprise, China’s National Science and Technology Small and Medium Enterprise, High-tech Research and Development Center (Industrial) of Local Enterprise, and Local Eyas Enterprise.

It has also obtained the certifications of IATF16949 international automotive quality management system and ISO9001 quality management system.

## Experiment&Production Equipment



# Product Certifications



# Enterprise Honors



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## Quality Technical Index

Appearance: white powder

Melting point: 160°C

Volatiles:  $\leq 0.5\%$  (WT)

## Adding method

There are two ways of application in plastics processing:

1. Adding stiffening nucleating agents to the resin for direct mixing, injection or extrusion molding;
2. Mixing the product with resin and other additives to make masterbatches, and then blended with ordinary polypropylene.

# POLYPROPYLENE STIFFENING NUCLEATING AGENT



## Overview

This product is an economic and efficient stiffening nucleating agent of large molecules, which can significantly increase the crystallization velocity of polypropylene, reduce its crystallization size, shorten its molding cycle, and effectively improve the rigidity, impact resistance and surface flatness of polypropylene products. Compared with the small molecule nucleating agents sold on the market, this product is non-toxic, odorless, dust-free, with good stability. It has no small molecule precipitates, fully compatible with polypropylene, and easy to disperse, and there is no precipitates migration from products.

## Features



### Process with environmental protection

The state of matter is 300 mesh powder  
Little dust will appear when added



### Significant stiffening

Increase the rigidity of polypropylene significantly  
Also improve impact resistance and heat deflection temperature



### Good compatibility

This product which is based on a polypropylene carrier is fully compatible with it  
With no agglomerate in the mixing process  
Uniformly dispersed with no small molecule precipitation



### Non-toxic and harmless

No waste water and exhaust gas emission during production  
Products passed the inspection of hygiene standard of food packaging



### Easy processing

Low melting point  
Fast molding



### Simple process

The product can be directly blended with polypropylene pellets  
There is no need to pre-mix with white oil  
And it does not need to de-volatilize small molecules

## Parameters

Grade	Appearance	Particle size	Recommended additive amount %	Functions	For resins
CS-6993	White powder	300 mesh	0.1-0.3%	Increase bending Increase crystallization temperature	Homopolymerized pp

## Performance comparison:

Item	Unit	Test method	Base material comparison	CS-6993
Bending strength	MPa	GB/T 9341-2008	39	51.9
Bending modulus	MPa		1464	2020
Extension intensity	MPa	GB/T 1040.2-2006	34.4	40.5
Tensile elongation	%		19	15.9
Notch impact strength of cantilever beam	kJ/m <sup>2</sup>	GB/T 1843-2008	3.2	3.2