



Mayzo Makes It Possible

Benetex[®] OB-1 HP

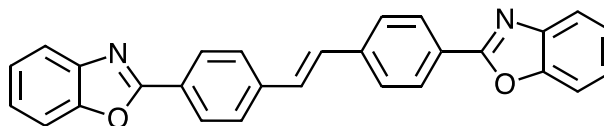
Optical Brightener, Fluorescent Whitening Agent

Overview

Benetex OB-1 HP is a heat resistant and chemically stable optical brightener that increases the whiteness of plastics and synthetic fibers and provides brighter looking colors. Optical brighteners function by a fluorescence process involving absorption of invisible UV light and emission of visible blue light. Benetex OB-1 HP is especially useful in polyester and polyamide (nylon) fibers, as well as in other high temperature engineering plastics.

Chemistry

Chemical Name: Benzoxazole, 2,2'-(1,2-ethenediyl-di-4,1-phenylene)bis-
CAS Number: 1533-45-5
Chemical Structure:



Typical Properties

Product Form: Solid
Melting Range: $\geq 359^{\circ}\text{C}$
Molecular Weight: 414.5 g/mol

Solubility (percent by weight, 20°C)

Acetone	<0.01	Methanol	<0.01
Chloroform	<0.01	Water	<0.01
Hexane	<0.01		

Applications

Benetex OB-1 HP is recommended to increase the whiteness of polyester and polyamide (nylon) fibers as well as in high temperature engineering plastics, including polycarbonates, polyesters, and polyamides (nylon). It is also suitable for use in styrenic and acrylic polymers.

Advantages

- Brilliant, neutral white cast that compensates for yellowing
- Low volatility and excellent heat resistant make the product ideal for use in fibers and in engineering plastics processed at high temperatures
- In combination with dyes, produces particularly bright shades
- Good light fastness
- FDA cleared for use in all polymers

Guidelines for Use

Recommended loading concentrations for Benetex OB-1 HP range between 50 and 1000 ppm (0.005-0.1%). The product can be used alone or in a variety of blends and combinations with other additives, including antioxidants, processing stabilizers, and light stabilizers. Higher load levels of Benetex OB-1 HP are required if it is used in combination with a UV absorber. The exact formulation to be used is dependent on the substrate, performance requirements, and other factors, and should be determined by the user based on testing to simulate actual conditions of use. Please contact Mayzo for specific recommendations.

Due to the high melting point of the product (359°C), care must be taken to ensure complete dispersion when Benetex OB-1 HP is used in polymers processed at lower temperatures such as styrenics and acrylics.

Storage

This product may be stored up to two years in a sealed container. Containers should be kept tightly closed when not in use and stored in a cool, dry place.

Safety

Please consult the Safety Data Sheet (SDS) prior to handling or using this product.

FDA Regulations

Benetex OB-1 HP has been cleared for use in all polymers under 21 CFR §178.3297. Please contact your Mayzo representative for complete details, including restrictions of use.

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