



Mayzo Makes It Possible

## Benetex<sup>®</sup> OB Plus

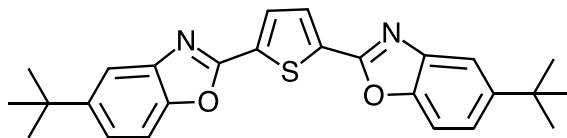
### Optical Brightener, Fluorescent Whitening Agent

#### Overview

Benetex OB Plus is a heat resistant, solvent soluble, chemically stable fluorescent whitener supplied in a fine powder form that is easier to dissolve and/or disperse as compared to conventional product forms of larger particle size. This form is ideal for screen-printing and coating applications. Like other optical brighteners, Benetex OB Plus functions by a fluorescence process involving absorption of invisible UV light and emission of visible blue light.

#### Chemistry

Chemical Name: 2,5-Thiophenediylbis(5-*tert*-butyl-1,3-benzoxazole)  
CAS Number: 7128-64-5  
Chemical Structure:



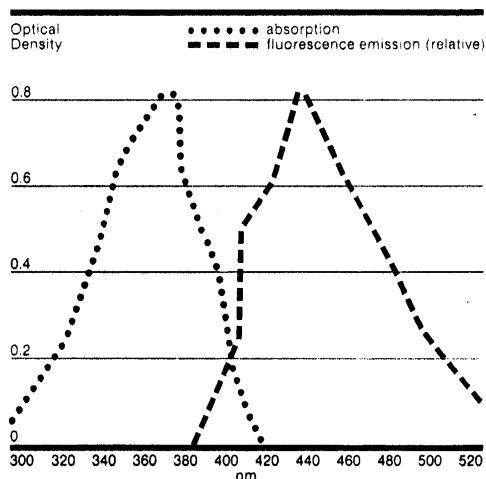
#### Typical Properties

Product Form: Solid  
Melting Range: 192 – 208°C  
Molecular Weight: 430.6 g/mol

#### Solubility (g/100 mL, 25°C)

Acetone	0.2	Ethylene Glycol	0.2
Butanol	0.2	<i>n</i> -Hexane	0.2
Carbon tetrachloride	5	Methanol	0.05
Chlorobenzene	10	Methyl ethyl ketone (MEK)	1
Chloroform	14	Methylene chloride/methanol (9:1)	2
Cyclohexanone	3	Tetrahydrofuran	5
Dimethylformamide	0.8	Toluene	5
Diocetylphthalate	0.7	Turpentine	0.1
Dioxane	2	Xylene	5
Ethyl acetate	1	Water	<0.01

## Absorption and Emission (Fluorescence) Spectra



Solvent	Ethanol
Concentration	7 mg/L
Layer thickness	1 cm
Absorption max.	375 nm
Fluorescence max.	435 nm

## Applications

Screen Printing – Benetex OB Plus is recommended in screen-printing applications, where reduced clogging of equipment is critical to increase productivity.

Coatings – Benetex OB Plus is recommended in clear-coat applications where efficiency of dispersion and a smooth coating appearance are required.

Benetex OB Plus can be used in other applications as well, including plastics (PVC, polyethylene, polypropylene, cellulose acetate, polystyrene, polycarbonate, acrylics, polyurethane, linear polyester, polyamides), printing inks, coatings, synthetic fibers, adhesives, and sealants. It is also useful as a tracer in coatings, adhesives, and sealants to ensure uniform coverage has been achieved.

## Advantages

- Does not require additional milling in coating and ink applications
- More easily dispersed than other optical brighteners
- More efficient than other optical brighteners
- Brilliant, bluish white effect that compensates for yellowing
- Good light fastness and low volatility
- Exceptional whitening properties
- Highly compatible with a wide range of organic substrates and solvents
- Excellent resistance to heat
- Useful as a tracer in clear coatings, adhesives, and sealants
- In combination with dyes, produces particularly bright shades
- FDA cleared for use in all polymers, adhesives, and pressure-sensitive adhesives

## Guidelines for Use

Recommended loading concentrations for Benetex OB Plus 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 PLUS 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.

### **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 PLUS has been cleared for use in adhesives under 21 CFR §175.105, in pressure sensitive adhesives under 21 CFR §175.125, and in all polymers under 21 CFR §178.3297. Please contact your Mayzo representative for complete details, including restrictions of use.

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