



Mayzo Makes It Possible

BENETEX® OB Plus

Optical Brightener, Fluorescent Whitening Agent

Overview

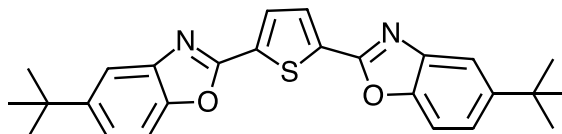
BENETEX® OB Plus is an optical brightener (fluorescent whitening agent) supplied in a fine powder form that is easier to dissolve and/or disperse as compared to conventional product forms of larger particle size. It is ideal for screen-printing and coating applications.

Advantages

- Does not require additional milling in coating and ink applications
- More easily dispersed than other optical brighteners
- Brilliant, bluish white fluorescence effect compensates for yellowing
- Exceptional whitening properties
- Highly compatible with a wide range of organic substrates and solvents
- Low volatility and thermally stable
- In combination with dyes, produces particularly bright shades
- Extensive FDA clearances

Chemistry

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



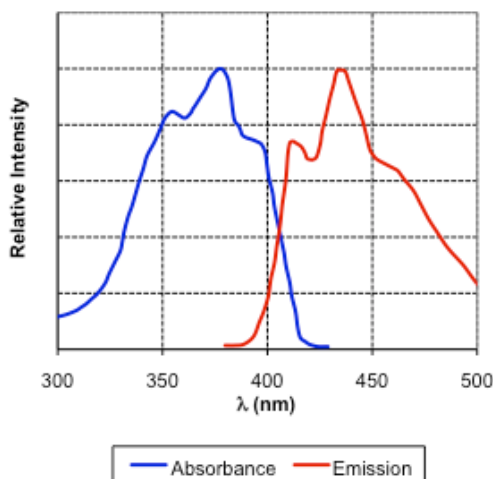
Typical Properties

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
ChlorOB Plusenzene	10	Methyl ethyl ketone (MEK)	1
Chloroform	14	Methylene chloride/methanol (9:1)	2
Cyclohexanone	3	Tetrahydrofuran	5
Dimethylformamide	0.8	Toluene	5
Diethylphthalate	0.7	Turpentine	0.1
Dioxane	2	Xylene	5
Ethyl acetate	1	Water	<0.01

Absorption and Emission (Fluorescence) Spectra (in DMF)



Absorption max. 375 nm
Fluorescence max. 435 nm

Applications

In screen printing, BENETEX® OB Plus provides reduced clogging of equipment critical to increasing productivity.

In 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.

Due to the inherently limited light-fastness of optical brighteners, BENETEX® OB Plus is generally recommended for indoor use only.

Guidelines for Use

Suggested use levels range from 50 to 1000 ppm (0.005-0.1%). BENETEX® OB Plus 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 when 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 your Mayzo representative for specific recommendations for your application.

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 food contact applications under 21 CFR §175.105 (adhesives), 21 CFR §175.125 (pressure-sensitive adhesives), and 21 CFR §178.3297 (colorants for polymers). Please consult the referenced regulations for complete details, including restrictions of use.

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