

Printing & Packaging

Industrial Coatings

Technical Data Sheet

Tinopal® OB CO



Product Description

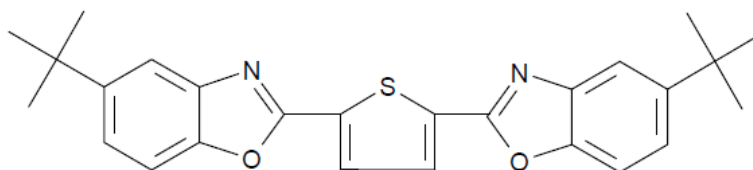
Tinopal® OB CO is a fluorescent optical brightener for coating and printing ink applications.

Key Features & Benefits

- *Brilliant bluish whitening effects*
- *Good compatibility in a wide range of resins*
- *Excellent heat resistance*
- *High chemical stability*
- *For Indoor use only*

Chemical Composition

2,5-thiophenediylbis(5-tert-butyl-1,3-benzoxazole)



Properties

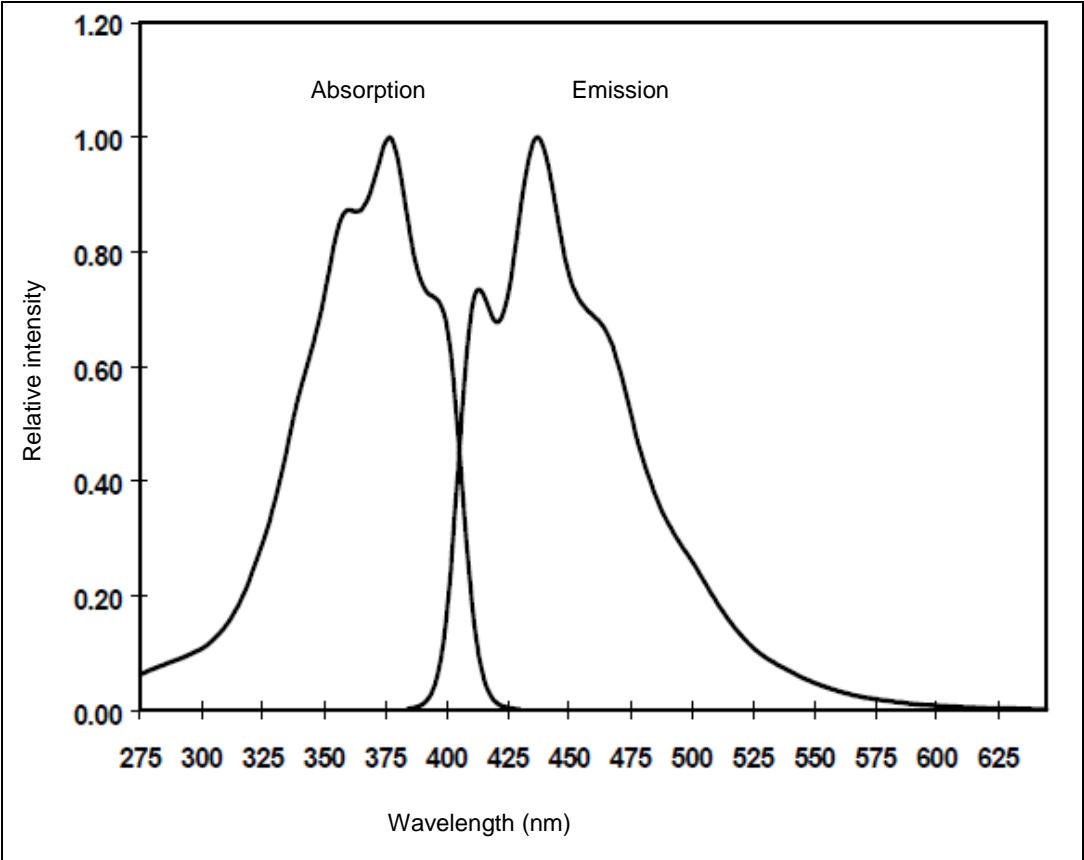
Typical Properties

Appearance	yellow powder
CAS number	7128-64-5
Molecular weight	430.6 g/mol
Density at 20°C (68°F)	~ 1.26 g/cm ³
Melting range	196 – 203°C (385 – 397°F)

Solubility at 20°C (g/100 g solution)

Acetone	0.5
Chloroform	14
Dimethyl formamide (DMF)	0.8
Dioxane	2
n-Hexane	0.2
Methanol	0.1
Methyl ethyl ketone	1.3
Tricresyl phosphate	0.8
Xylene	5
Water	0.001

These typical values should not be interpreted as specifications.



Applications

Tinopal® OB CO is a fluorescent optical brightener that provides excellent heat resistance, high chemical stability, and brilliant bluish whitening effects with good compatibility in a wide range of resins for coating and printing ink applications.

Tinopal® OB CO is recommended for applications such as:

- White and pastel tone paints where it intensifies the degree of whiteness
- Clear coats and overprint varnishes where it is used to mask the yellowish inherent color and to intensify the brilliance of white and colored base coats
- Primer and/or topcoats where it is used as a marker to identify voids and uneven coverage
- Black and blue printing inks to increase their deep tone
- Printing inks for quick identification, security and safeguard against forgeries (i.e. bank notes)
- Packaging inks as promotional tool or as tracer for packaging lines
- Manufacture of fluorescent pigments/dyestuffs to reinforce the brightness of certain shades, particularly blue ones
- Thermal dye diffusion paper to enhance paper whiteness
- Film base for photographic paper

If Tinopal® OB CO is to be used in combination with a UV absorber, the absorption spectrum of the latter should leave an open window in the near UVA for the optical brightener.

Due to the intrinsic light fastness properties of optical brighteners, Tinopal® OB CO is recommended for indoor use only.

Recommended Concentrations The amount of Tinopal® OB CO required for optimum performance should be determined in trials covering a concentration range and is dependent upon the desired brightening effect.

Application	Weight %
Clear coats and overprint varnishes	0.02 – 0.1% on binder solids
White coatings	0.5 – 5% on pigment weight
Marker in primers	2.0 – 4.0% on binder solids

Safety

General

The usual safety precautions when handling chemicals must be observed. These include the measures described in Federal, State, and Local health and safety regulations, thorough ventilation of the workplace, good skin care, and wearing of protective goggles.

Safety Data Sheet

All safety information is provided in the Safety Data Sheet for Tinopal® OB CO.

Storage

Properly stored and protected, an unopened container of Tinopal® OB CO should have a shelf life of at least five years.

Important

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