

MEGAWHITE PL

FLUORESCENT WHITENING AGENT FOR PLASTICS

INTRODUCTION :

Optical whiteners function by absorbing ultraviolet radiation and re-emitting blue light. The emitted blue light will reduce the yellowness of a polymer and provide the whiter-than-white appearance.

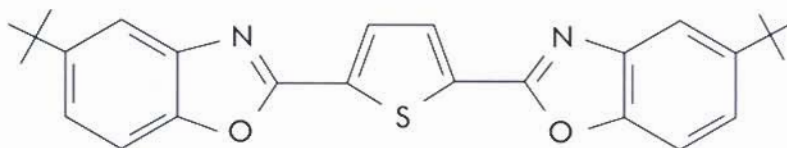
Megawhite PL is a heat resistant, solvent soluble, chemically stable fluorescent whitener that provides brighter looking colors. It is used to offset the yellowness of a polymer and to yield a whiter appearance. Optical brighteners create brilliance by absorbing UV light, modifying the wavelength of the light and then emitting the light in a fluorescent fashion. **Megawhite PL** can also be used as a tracer in various applications and as an optical brightener in thermoplastics, coatings, printing inks, dyes, man-made fibers.

CHEMICAL NAME : 2,2'-(2,5-thiophenediyl)bis(5-tert-butylbenzoxazole)

EMPIRICAL FORMULA : $C_{26}H_{26}N_2O_2S$

CAS : 7128-64-5

CHEMICAL STRUCTURE :



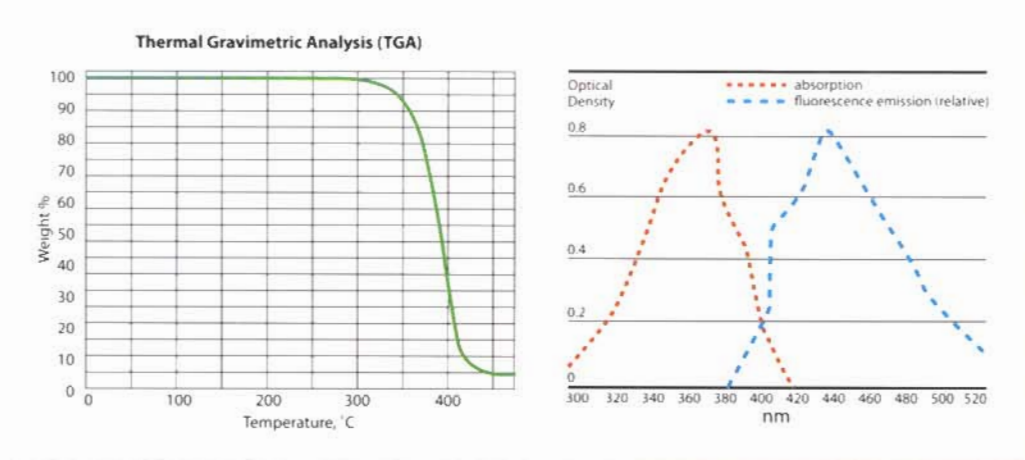
PHYSICAL PROPERTIES :

Appearance	Yellowish, greenish crystalline powder
Molecular Weight	443 gm/ml
Melting Range	195 - 208°C
Ash	0.2% Max
Assay	99% Min
Volatile Matter	< 0.5% Max
Solubility(1g/100ml Chloroform)	Clear
% Transmittance	450nm – 93% Min 500nm – 95% Min
Specific Gravity (20°C)	1.26 g/cm ³
Vapor Pressure (20°C)	2.6 E-8 Pa
Decomposition Temperature	>350°C

SOLUBILITY : Megawhite PL is soluble in –

- Carbon Tetrachloride
- Chlorobenzene
- Chloroform
- Tetrahydrofuran
- Toluene
- Xylene
- Other organic solvents

ABSORPTION SPECTRUM



Extinction and Fluorescence Emission Curves
(Active Ingredient in powdered form)

APPLICATIONS :

Thermoplastics - **Megawhite PL** can be used to impart excellent brightness to various thermoplastics, including: polyvinyl chloride, polyethylene, polypropylene, cellulose acetate, polystyrene, polycarbonate, acrylics, polyolefin, adhesives, polyurethane, linear polyester, and polyamides.

Coatings - **Megawhite PL** provides an excellent means to determine coverage of either conventional or UV cure coatings. Small amounts act as a tracer which, when viewed under a black light, indicate whether or not uniform coating coverage has been achieved. This is especially useful for clear coatings where coverage can be difficult to determine by conventional means. **Megawhite PL** can also be used to offset the yellowness of coatings to yield a whiter appearance.

Printing Inks - **Megawhite PL** may be used in printing inks to facilitate the quick identification of security bonds, and also as a safeguard against forgeries (bank notes). **Megawhite PL** may also be combined with dyes to produce particularly bright shades. The effect is especially pronounced in pastel shades.

Man-made fibers - **Megawhite PL** imparts a lightfast brightness with good textile fastness properties to both PVC and acetate fibers.

Main applications - Include fibers, molded articles, films, sheets, clear lacquers, paints, printing inks, and synthetic leather.

STORAGE :

Megawhite PL should be stored in a cool, dry area. Extended storage at elevated temperatures or exposure to direct heat or sunlight could reduce product life. Keep Container sealed when not in use.

FEATURES :

- It is food grade optical Brightener.
- Brilliant, bluish neutral white effects 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