

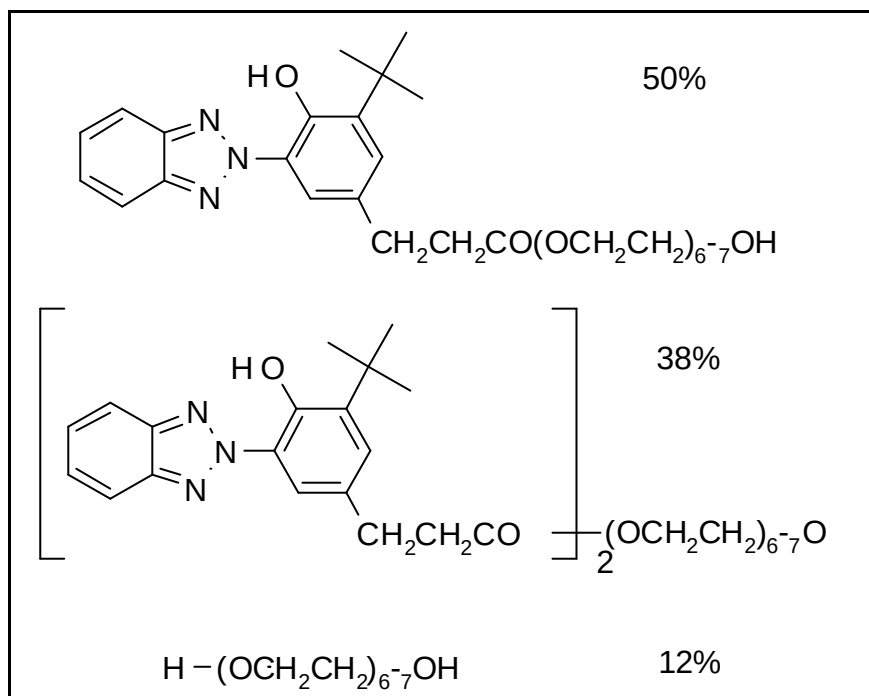


Ciba[®] Tinuvin[®] 1130

General

TINUVIN 1130 is a liquid UV absorber of the hydroxyphenyl-benzotriazole class specifically developed for coatings. The product is miscible with all common solvents but also easily incorporated into water borne systems. In view of the high durability demands, its high temperature and extraction resistance makes it especially suitable for industrial and automotive coatings. Because of its broad UV absorption, TINUVIN 1130 also provides efficient protection to light sensitive substrates such as wood and plastics.

Chemical Composition



β -[3-(2-H-Benzotriazole-2-yl)-4-hydroxy-5-*tert*.butylphenyl]-propionic acid-poly(ethylene glycol) 300-ester

and

Bis{ β -[3-(2-H-Benzotriazole-2-yl)-4-hydroxy-5-*tert*.butylphenyl]-propionic acid}-poly(ethylene glycol) 300-ester

Molecular weight: 637 (monomer), 975 (dimer)

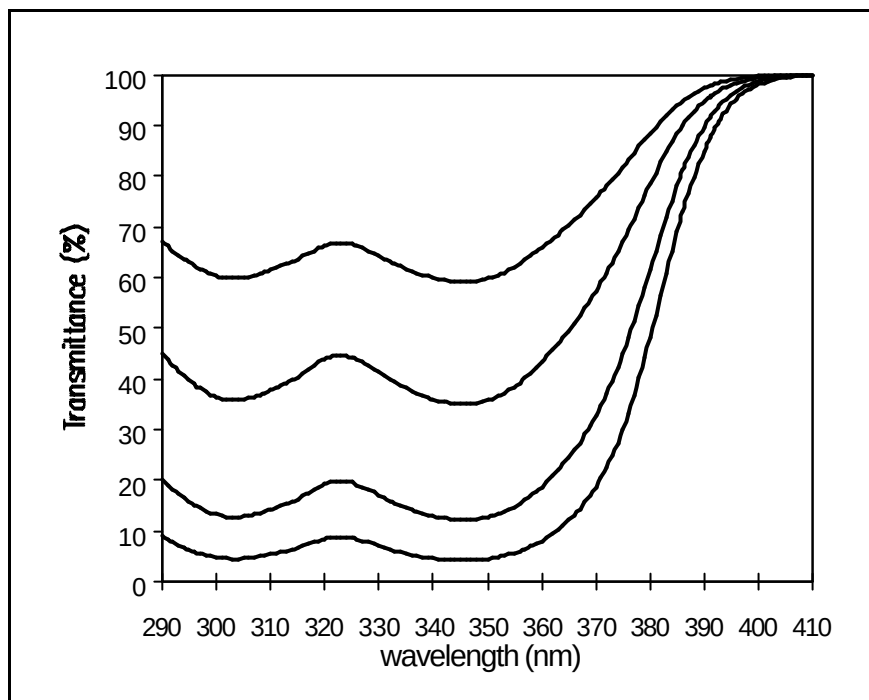
CAS No. 104810-48-2



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Transmittance Spectrum

in toluene
cell thickness: 1 cm



Explanation:

Top line: 0.001% TINUVIN 1130, corresponds to 0.25% in a 40 μ film
Second line: 0.002% TINUVIN 1130, corresponds to 0.50% in a 40 μ film
Third line: 0.004% TINUVIN 1130, corresponds to 1.0% in a 40 μ film
Bottom line: 0.006% TINUVIN 1130, corresponds to 1.5% in a 40 μ film

Physical Properties

Appearance: yellow to light amber viscous liquid

Dynamic Viscosity at 20°C: 7400 mPa.s

Density at 20°C: 1.17 g/cm³

Miscibility (g/100 g solution) at 20°C:

butylcarbitol	> 50	
butanol	> 50	
butylacetate	> 50	
Depanol J ¹⁾	> 50	
ethylglycol	> 50	
1-methoxypropylacetate-2	> 50	
methylethylketone	> 50	
Solvesso 100 ²⁾	> 50	n.m.= not miscible
Solvesso 150 ²⁾	> 50	¹⁾ Trade Mark of Hoechst
xylene	> 50	²⁾ Trade Mark of Esso
water	n.m.	
hexanedioldiacrylate	> 50	
trimethylolpropanetriacrylate	> 50	



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Application

The dispersion of TINUVIN 1130 in water borne systems may be eased by dilution with a water miscible solvent such as butylcarbitol.

TINUVIN 1130 is recommended for both solvent and water based coatings such as:

- automotive coatings
- industrial coatings
- trade sales coatings

TINUVIN 1130 may be used in combination with a light stabilizer of the sterically hindered amine class (HALS) such as TINUVIN[®] 144, TINUVIN[®] 292 or TINUVIN[®] 123. These synergistic combinations impart superior coating protection against gloss reduction, cracking, blistering, delamination and color change. The light stabilizers may be added in two coat automotive finishes to the clear coat and to the base coat. However, according to our experience, the optimum protection is achieved by adding the light stabilizer to the topcoat.

The amount of TINUVIN 1130 required for optimum performance should be determined in trials covering a concentration range.

Recommended concentrations :

(concentrations are based on weight percent binder solids)

1.0 - 3.0 %	TINUVIN 1130
+ 0.5 - 2.0 %	TINUVIN 123, TINUVIN 144 or TINUVIN 292

Safety and Handling

TINUVIN 1130 should be handled in accordance with good industrial practice. Detailed information is provided in the Safety Data Sheet.

Important Notice

Purchase of TINUVIN 1130 alone does not permit the use of TINUVIN 1130 in combination with hindered amine light stabilizers (HALS) in stoving lacquers covered by US Patent Nos. 4'314'933, 4426'471, 4'426'472, 4'344'876, 4'429'007 and EP Patent No 52073 and corresponding patents and patent applications in other countries.

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