

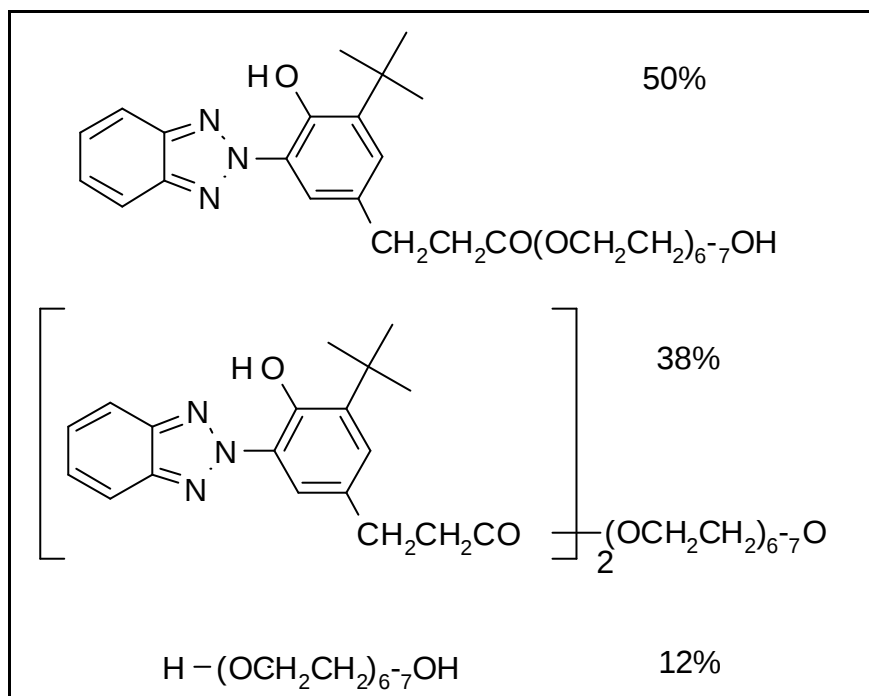


Ciba[®] Tinuvin[®] 1130

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)

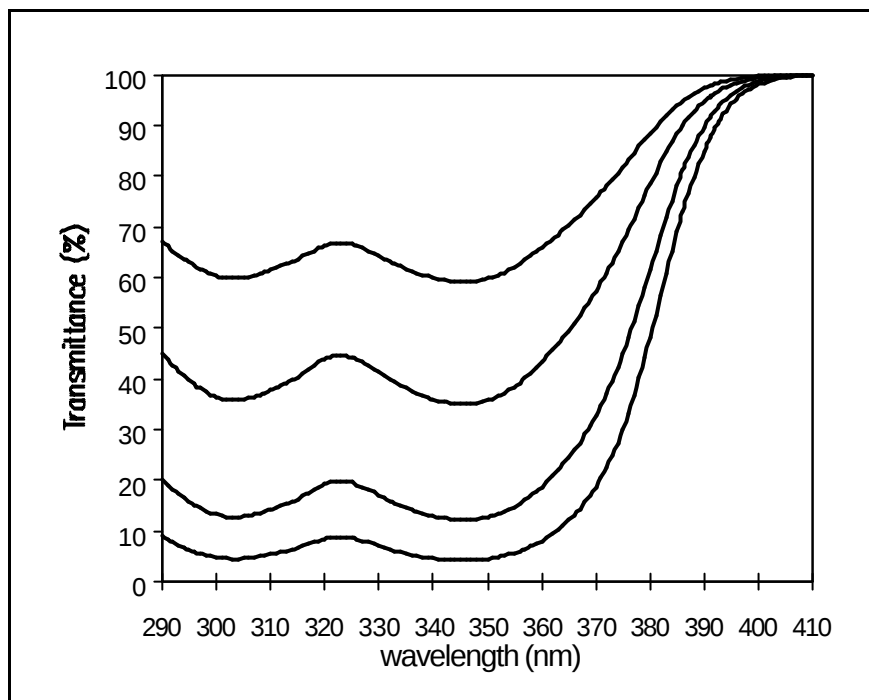
CAS No. 104810-48-2



Ciba[®] Tinuvin[®] 1130

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
Solvesso 150 ²⁾	> 50
xylene	> 50
water	n.m.
hexanedioldiacrylate	> 50
trimethylolpropanetriacrylate	> 50

n.m.= not miscible

¹⁾ Trade Mark of Hoechst

²⁾ Trade Mark of Esso



Ciba[®] Tinuvin[®] 1130

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.

IMPORTANT: The following supersedes Buyer's documents. SELLER MAKES NO REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED, INCLUDING OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. No statements herein are to be construed as inducements to infringe any relevant patent. Under no circumstances shall Seller be liable for incidental, consequential or indirect damages for



Ciba[®] Tinuvin[®] 1130

alleged negligence, breach of warranty, strict liability, tort or contract arising in connection with the product(s). Buyer's sole remedy and Seller's sole liability for any claims shall be Buyer's purchase price. Data and results are based on controlled or lab work and must be confirmed by buyer by testing for its intended conditions of use. The product(s) has not been tested for, and is therefore not recommended for, uses for which prolonged contact with mucous membranes, abraded skin, or blood is intended; or for uses for which implantation within the human body is intended.