

Industrial Coatings

Technical Data Sheet

Tinuvin® 1130



Product Description

Tinuvin® 1130 is a liquid UV absorber of the hydroxyphenyl benzotriazole class specifically developed for industrial coating applications.

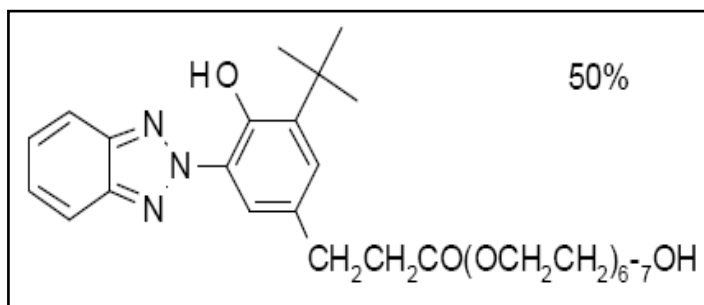
Key Features & Benefits

- Versatile product for use in water and solvent based coatings
- Excellent spectral coverage in the UV-B and UV-A region
- Hydroxyl functionality can be reacted with melamine and isocyanate crosslinkers to reduce migration

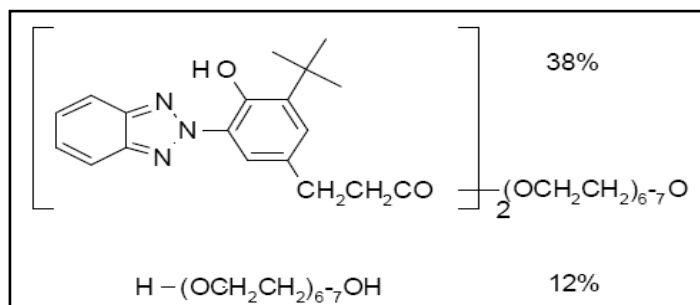
Chemical Composition

A mixture of: a) 50% β -[3-(2-H-Benzotriazole-2-yl)-4-hydroxy-5-*tert*.butylphenyl]-propionic acid-poly(ethylene glycol) 300-ester, b) 38% Bis[β -[3-(2-H-Benzotriazole-2-yl)-4-hydroxy-5-*tert*.butylphenyl]-propionic acid]-poly(ethylene glycol) 300 -ester, and c) 12% polyethylene glycol

A



B



Properties

Typical Characteristics

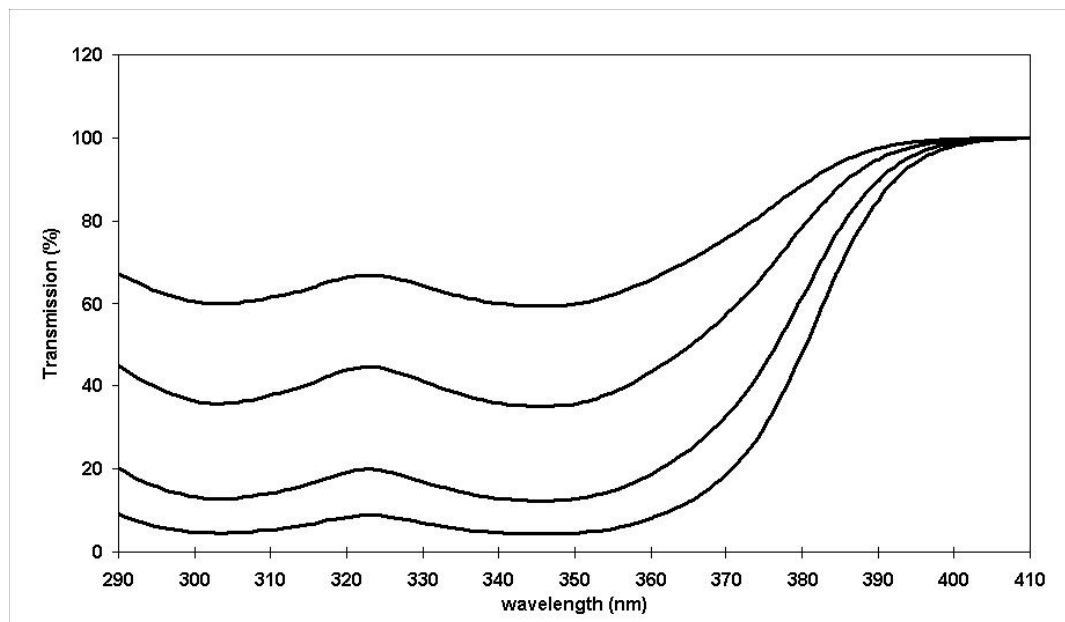
Appearance	yellow to light amber viscous liquid
CAS No.	104810-48-2
Molecular weight	637 (monomer), 975 (dimer)
Density at 20°C	1.17 g/cm ³
Viscosity at 20°C	7,400 cps

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

butyl carbitol	> 50
butanol	> 50
butyl acetate	> 50
ethyl glycol	> 50
1-methoxy propylacetate-2	> 50
methylethylketone	> 50
xylene	> 50
hexane dioldiacrylate (HDDA)	> 50
trimethylolpropane triacrylate (TMPTA)	> 50
water	not miscible

These typical values should not be interpreted as specifications. Miscibility should be tested for each individual case.

**Transmittance Spectrum
(in Toluene, cell thickness 1cm)**



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

Applications

Tinuvin® 1130 is a liquid UV absorber of the hydroxyphenyl benzotriazole class specifically developed for industrial coating applications. Its high temperature and extraction resistance makes it especially suitable for industrial and automotive coatings. Because of its broad UV absorption, it also provides efficient protection to light sensitive substrates such as wood and plastics.

Tinuvin® 1130 is recommended for both solvent- and water-based coatings such as:

- Interior/exterior general industrial metal coating applications
- Interior/exterior plastic component coating applications
- Interior/exterior wood coatings for floor, furniture, or mill work applications
- Automotive OEM or refinish applications

Processing

Since Tinuvin® 1130 is miscible with all common solvents, it is also easily incorporated into waterborne systems by dilution with a water-miscible solvent such as butylcarbitol.

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, de-lamination, and color change. The light stabilizers may be added in two-coat automotive finishes to the clear coat and to the base coat. However, we recommend adding the light stabilizer to the topcoat for optimum protection.

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

Recommended Concentrations 1.0 – 3.0% Tinuvin® 1130 + 0.5 – 2.0% Tinuvin® 123, Tinuvin® 144, or Tinuvin® 292

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.

Material Safety Data Sheet

All safety information is provided in the Material Safety Data Sheet for Tinuvin® 1130.

Important

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BASF Corporation
24710 W Eleven Mile Road
Southfield, MI 48033
ph: 800-962-7829
fax: 800-971-1123
Email: polyorders@basf.com
Email: edtech_info@basf.com
www.basf.us/dpsolutions