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Tinuvin® 5350

Product Description

Tinuvin 5350 is a solvent-free, liquid blend of a 2-(2-hydroxyphenyl)-benzotriazole UV absorber (UVA) and a basic hindered amine light stabilizer (HALS) designed to fulfill the high cost/performance and durability requirements of automotive coatings.

Key Features & Benefits

- Synergistic blend of UVA/HALS for solvent based systems
- Provides protection of coatings against cracking, loss of gloss, and color change
- Recommended for non-acid catalyzed systems

Chemical Composition

Blend of 2-(2-hydroxyphenyl)-benzotriazole UVA and a basic HALS

Properties

Typical Properties

Appearance		clear, slightly yellow to yellow/green liquid
Clarity of solution		clear solution
Content of HALS	%	48 – 52
Content of Benzotriazol	%	48 – 52
CIE-Lab C*		≤ 25

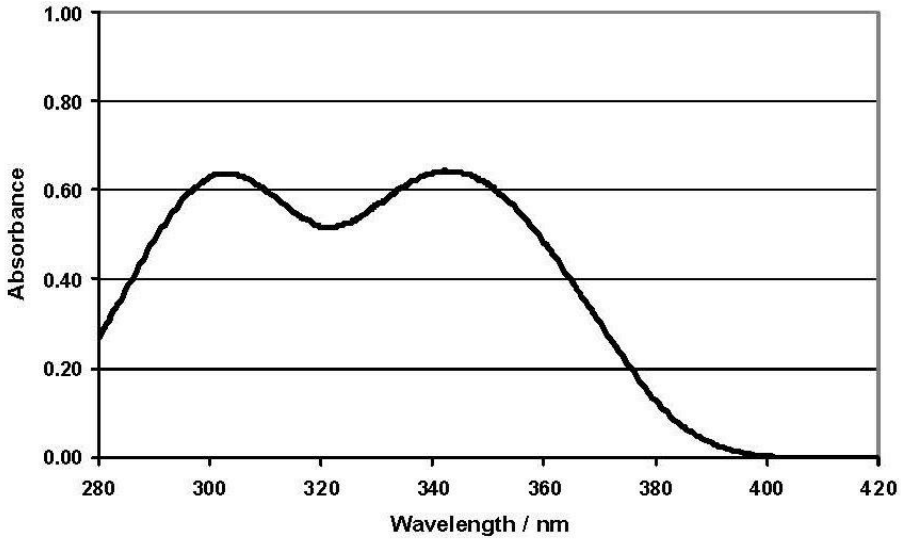
Typical Characteristics

Appearance		viscous amber liquid
Dynamic Viscosity at 25 °C	cps	10,000
Density at 20 °C	g/ml	0.98

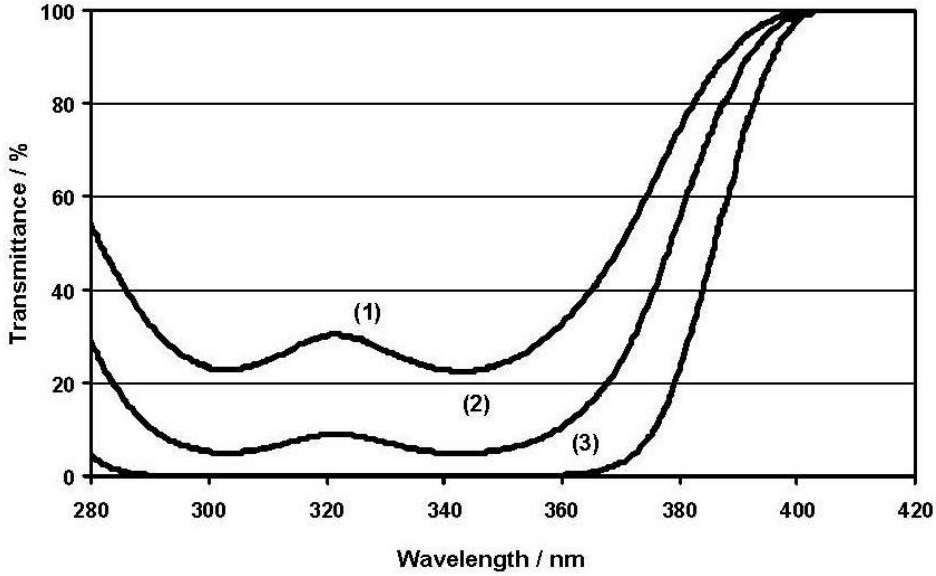
Miscibility: Tinuvin 5350 is miscible to more than 50% with most commonly used paint solvents. Water solubility is less than 0.01%.

These typical values should not be interpreted as specifications.

UV Absorbance Spectrum
(40 mg/l in chloroform, cell thickness = 1 cm)



UV Transmission Spectrum
(The theoretical concentration of the UVA in an applied 40 µm clear coat was calculated as a function of the concentration in chloroform (d = 1.48 g/cm³) with the help of the Lambert-Beer law)



Line one: 0.003% Tinuvin 5350 corresponds to 0.68% active UVA in a 40 µm film
Line two: 0.005% Tinuvin 5350 corresponds to 1.35% active UVA in a 40 µm film
Line three: 0.014% Tinuvin 5350 corresponds to 3.38% active UVA in a 40 µm film

Applications

Tinuvin 5350 is a solvent-free, liquid blend of a UV absorber (UVA) and a basic hindered amine light stabilizer (HALS) designed to fulfill the high cost/performance and durability requirements of automotive coatings.

Tinuvin 5350 is recommended for
- Automotive coatings
- General industrial applications, i.e. coil coatings, wood coatings

The liquid form of Tinuvin 5350 provides easy incorporation into waterborne systems.

These combinations improve the durability of clear coats by inhibiting or retarding the occurrence of failures such as gloss reduction, cracking, color change, blistering and delamination.

Recommended concentrations

The amount of Tinuvin 5350 required for optimum performance should be determined in laboratory trials covering a concentration range.

The dry film thickness (DFT) directly affects the amount of UVA needed. The following recommended concentrations are to achieve proper stabilization for given DFT (light stabilizers % is indicated on total formulation):

10 µm – 20 µm:	8.0 % – 4.0 %
20 m – 40 µm:	4.0 % – 2.0 %
40 µm – 80 µm:	2.0 % – 1.0 %

Safety

General

The usual safety precautions when handling chemicals must be observed. These include the measure 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 Tinuvin 5350.

Storage

Please refer to the “Handling and Storage of Polymer Dispersions” brochure.

Important

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Good Chemistry at Work

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