

Tinuvin® 1130

UV absorber

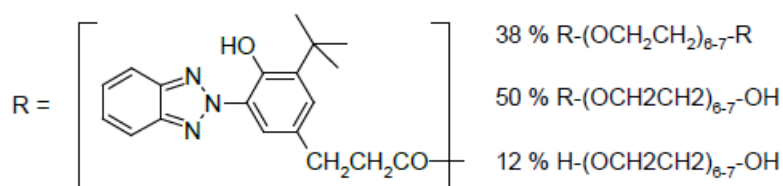
Product description

Tinuvin® 1130 is a liquid hydrophilic benzotriazole-based UV absorber for coatings, printing and packaging, adhesives and sealants. It is universally applicable in solvent- and water-based coatings including UV-curable systems.

Key benefits

- Universally applicable in solvent- and water-based systems
- Broad spectral coverage
- Good long-term performance (photo permanence)
- Good thermal stability
- Reactable via OH function into NCO- and melamine-crosslinked systems

Chemical nature



2-(2-hydroxyphenyl)-benzotriazole

CAS numbers

104810-47-1, 104810-48-2, 25322-68-3

Molecular weight

637 g/mol, 975 g/mol

Properties

Physical form

Clear, slightly yellow to amber liquid

Technical data

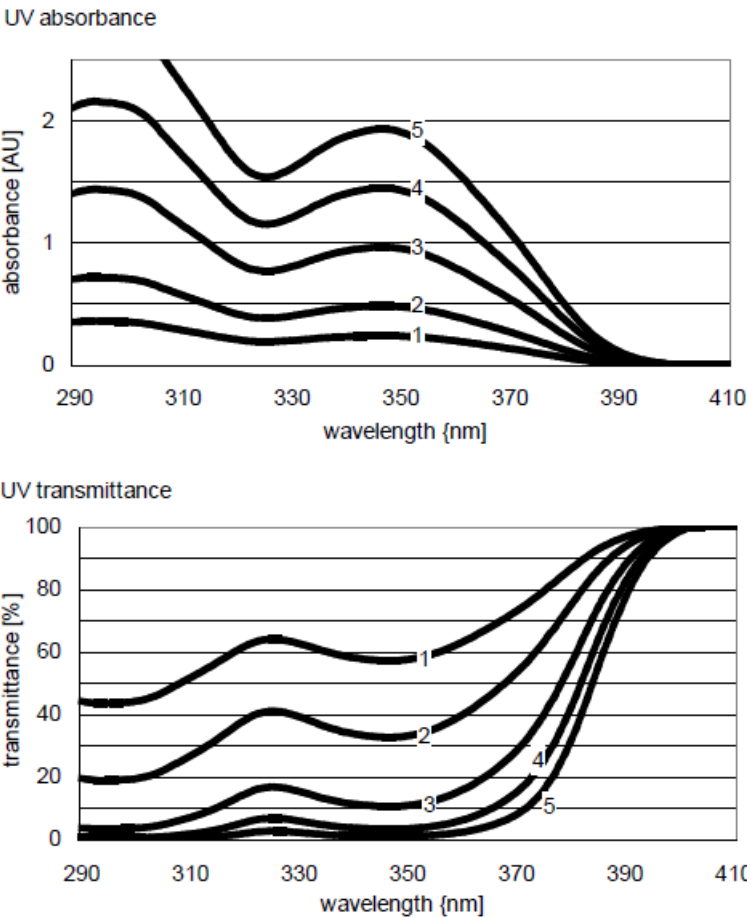
(not supply specification)

Viscosity, dynamic	DIN 53018/53019; 20 °C	~ 8.3 Pa.s
Density	DIN 51757; 20 °C	1.15 – 1.19 g/cm ³
Flash point	DIN EN ISO 13736	216 – 220 °C

Miscibility

Miscible with most organic solvents, easy to incorporate into water-based systems by use of co-solvents

Spectral properties



Legend

- | | |
|---|---|
| 1 | 10 mg/l (0.001 % \approx 0.25 % active in 40 μ m) |
| 2 | 20 mg/l (0.002 % \approx 0.50 % active in 40 μ m) |
| 3 | 40 mg/l (0.004 % \approx 1.00 % active in 40 μ m) |
| 4 | 60 mg/l (0.006 % \approx 1.50 % active in 40 μ m) |
| 5 | 80 mg/l (0.008 % \approx 2.00 % active in 40 μ m) |

The theoretical concentration in an applied 40- μ m clear coat was calculated as a function of the concentration in toluene with the help of the Lambert-Beer law. Spectra were recorded in toluene, light path length = 1 cm.

Application

Fields of application

- Automotive and industrial coatings
- Wood stains and varnishes, wood-care products, waxes
- Architectural coatings (wall, floor coatings, ...)
- Heavy-duty maintenance and marine coatings
- Glass and ceramic coatings (architectural glazing, packaging, ...)
- Adhesives and sealants

For outdoor applications, Tinuvin® 1130 needs to be combined with a hindered amine light stabilizer (HALS) such as Tinuvin® 123 (for acid-catalyzed systems) or Tinuvin® 292 (for 2K PUR).

Binder systems

- Solvent- and water-based 1K as well as 2K PUR (acrylic/NCO,PES/NCO, ...)
- Water-based systems (acrylic, PUD, 2K PUR, ...)
- Solvent- and water-based alkyds, waxes, oils (air-drying systems)
- Thermoplastic (acrylic, vinylic, ...)
- UV-curable systems (acrylic, PES, ...)

Recommended concentrations

The concentration of Tinuvin® 1130 depends on dry-film thickness and desired degree of protection. The amount required for optimum performance should be determined in trials covering a concentration range.

Dry-film thickness	By weight on binder solids
10 – 20 µm	12.0 – 6.0 %
20 – 40 µm	6.0 – 3.0 %
40 – 60 µm	3.0 – 2.0 %

Storage

When kept in original unopened containers and at temperatures of 5 – 35 °C.
Tinuvin® 1130 can be stored for up to 3 years from the date of manufacture.

Safety

When handling this product, please comply with the advice and information given in the safety data sheet and observe protective and workplace hygiene measures adequate for handling chemicals.

Note

The data contained in this publication are based on our current knowledge and experience. In view of the many factors that may affect processing and application of our product, these data do not relieve processors from carrying out their own investigations and tests; neither do these data imply any guarantee of certain properties, nor the suitability of the product for a specific purpose. Any descriptions, drawings, photographs, data, proportions, weights, etc. given herein may change without prior information and do not constitute the agreed contractual quality of the product. The agreed contractual quality of the product results exclusively from the statements made in the product specification. It is the responsibility of the recipient of our product to ensure that any proprietary rights and existing laws and legislation are observed.

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