Tinuvin® 99-2

UV absorber

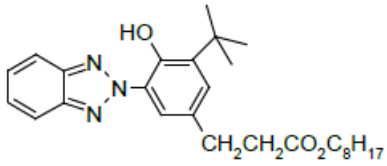
Product description

Tinuvin® 99-2 is a liquid benzotriazole-based UV absorber for coatings, adhesives and sealants. It was designed to meet performance and durability requirements of solvent-based industrial and architectural coatings including UV-curable systems.

Key benefits

- Good long-term performance (photo permanence)
- Medium thermal stability
- Broad spectral coverage

Chemical nature



2-(2-hydroxyphenyl)-benzotriazole, containing 5 % of 1-methoxy-2-propyl acetate (CAS No. 108-65-6)

CAS number 127519-17-9

Molecular weight 451.6 g/mol

Properties

Physical form Viscous, greenish to amber liquid

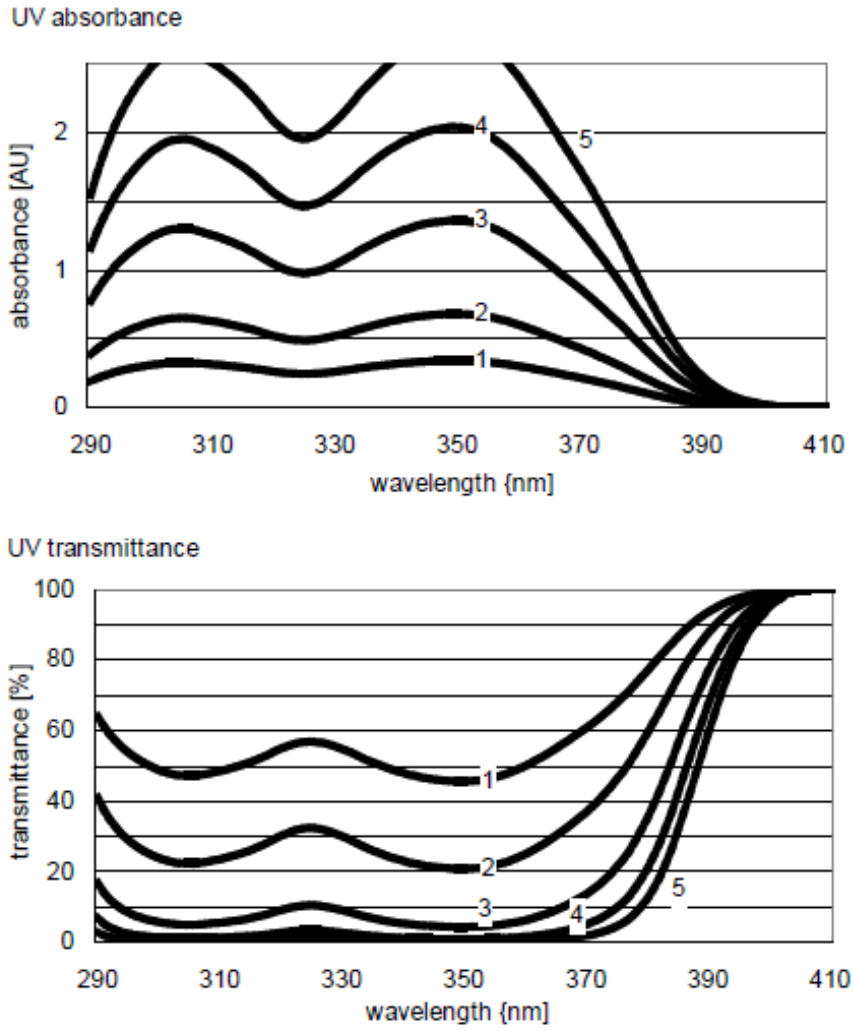
Technical data

(not supply specification)

Viscosity, dynamic	DIN 53018/53019 (20 °C)	~ 3.4 Pa.s
Density	DIN 51757 (20 °C)	1.05 – 1.09 g/cm³
Flash point	92/69/EWG A. 9	73 – 77 °C

Miscibility With most common organic solvents, easy to incorporate into water-based systems by use of co-solvents

Spectral properties



Legend

1	10 mg/l (0.001 % ≈ 0.25 % active in 40 µm)
2	20 mg/l (0.002 % ≈ 0.50 % active in 40 µm)
3	40 mg/l (0.004 % ≈ 1.00 % active in 40 µm)
4	60 mg/l (0.006 % ≈ 1.50 % active in 40 µm)
5	80 mg/l (0.008 % ≈ 2.00 % active in 40 µm)

The theoretical concentration in an applied 40 µm 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

- General industrial coatings
- Architectural coatings
- Wood stains and varnishes, wood-care products
- Heavy-duty maintenance and marine coatings
- Adhesives and sealants

For outdoor applications, Tinuvin® 99-2 needs to be combined with a hindered amine light stabilizer (HALS) such as Tinuvin® 5100 (for acid-catalyzed or air-drying systems) or Tinuvin® 292 (for 2K PUR).

Binder systems

- 1K and 2K PUR (acrylic/NCO, PES/NCO, …)
- Alkyds, waxes, oils (air-drying systems)
- Thermoplastic (acrylic, vinylic, …)
- UV-curable systems (acrylic, PES, …)

Recommended concentrations

The amount of Tinuvin® 99-2 required for optimum performance should be determined in trials covering a concentration range.

Dry-film thickness	By weight on binder solids
10 – 20 µm	10.0 – 5.0 %
20 – 40 µm	5.0 – 2.5 %
40 – 60 µm	2.5 – 1.5 %

Storage

When kept in original unopened containers and at temperatures of 5 –35 °C.

Tinuvin® 99-2 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

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