Tinuvin® 5060

Light stabilizer blend

Product description

Tinuvin® 5060 is a liquid light stabilizer blend containing a benzotriazole based UVA and a non-basic HALS developed for coatings, adhesives and sealants. It was designed to fulfill the high performance and durability requirements for exterior solvent based industrial, architectural and decorative coatings.

Key benefits

- Medium long term performance and thermalstability
- Broad spectral coverage makes it suitable for a wide range of applications
- Contains a non-basic HALS especially suited for oxidative drying and acid catalyzed systems, does not interact with biocides and acid treated pigments
- Synergistic combination imparts superior coating protection against gloss reduction, cracking, blistering, delamination and color change and provides full substrate protection

Chemical nature

Blend based on a 2-(2-hydroxyphenyl)-benzotriazole UV absorber and a non-basic tetra-methyl piperidine derivative

Properties

Physical form

Viscous amber liquid

Technical data

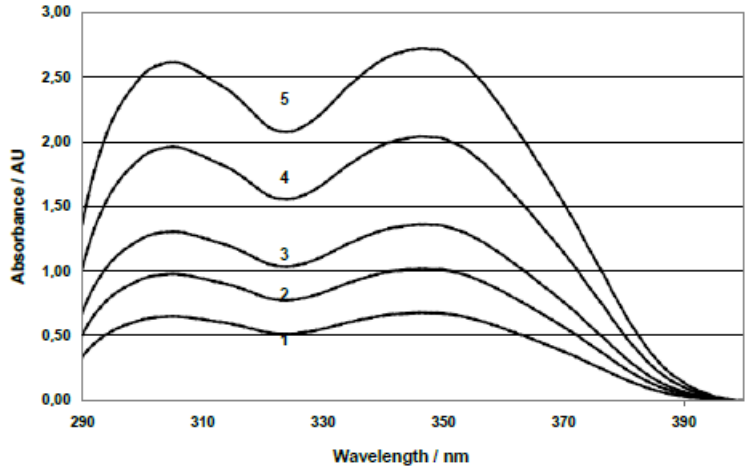
(not supply specification)

Viscosity, dynamic	DIN 53018/53019 (20 °C)	10,400 mPa.s
Density	DIN 51757 (20 °C)	1.01 – 1.05 g/cm³
Flash point	DIN EN ISO 13736	132 – 136 °C

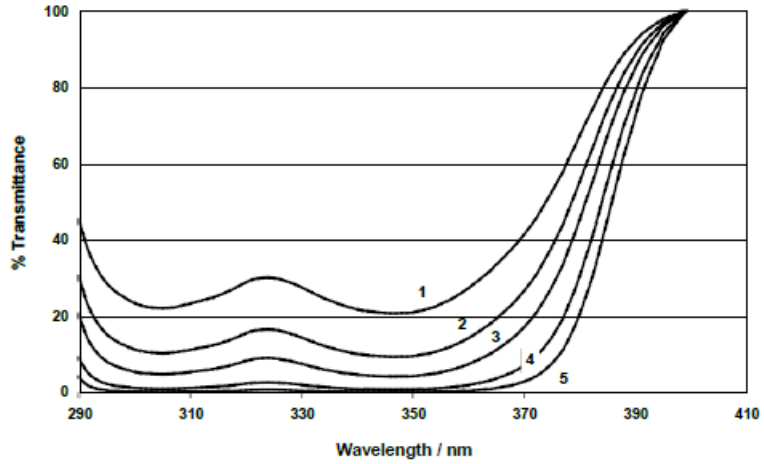
Miscibility

Miscible with most common organic solvents, practically immiscible with water

Spectral properties



UV absorbance



UV transmittance

Legend

1	40 mg/l (0.004 % ~ 1.00 % active in 40 µm)
2	60 mg/l (0.006 % ~ 1.50 % active in 40 µm)
3	80 mg/l (0.008 % ~ 2.00 % active in 40 µm)
4	120 mg/l (0.012 % ~ 3.00 % active in 40 µm)
5	160 mg/l (0.016 % ~ 4.00 % 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

The chosen UVA:HALS ratio makes Tinuvin® 5060 especially suited for clear coatings with a layer thickness of 40 – 80 µm and low pigmented coatings.

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

Binder systems

- Thermoplastics (acrylic, vinylic, PVC plastisol,…)
- Acid catalyzed paints (acrylic/melamine, PES/melamine,…)
- Oxidative drying systems (alkyds, oils, waxes, …)

Recommended concentrations

The concentration of Tinuvin® 5060 depends on the dry film thickness, the pigmentation and on the desired degree of protection. The amount of Tinuvin® 5060 required for optimum performance should be deter- mined in trials covering a concentration range.

Dry film thickness	(wt.%) on total binder solids
40 µm	6.0 %
60 µm	4.0 %
80 µm	3.0%

Storage

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

Tinuvin® 5060 can be stored for up to 2 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

BASF SE
Resins & Additives (Europe)
67056 Ludwigshafen, Germany
www.basf.com/resins

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