

Tinuvin[®] 5248

Product Description

Tinuvin 5248 is a liquid light stabilizer blend containing a triazine-based UV absorber and a basic HALS for coatings, adhesives, and sealants. It was designed to meet high performance and durability requirements of exterior solvent-based automotive, industrial, architectural, and decorative coatings including energy curable systems (UV, electron beam).

Key Features & Benefits

- High thermal stability and photopermanence
- Contains a basic multipurpose HALS
- The UV absorber is not sensitive to metal ions and amines and does not form colored complexes in their presence
- Synergistic combination imparts superior coating protection against gloss reduction, cracking, blistering, delamination, or color change, providing full substrate protection

Chemical Composition

Blend based on a 2-hydroxyphenyl-s-triazine UV absorber and a basic HALS

Properties

Typical Properties

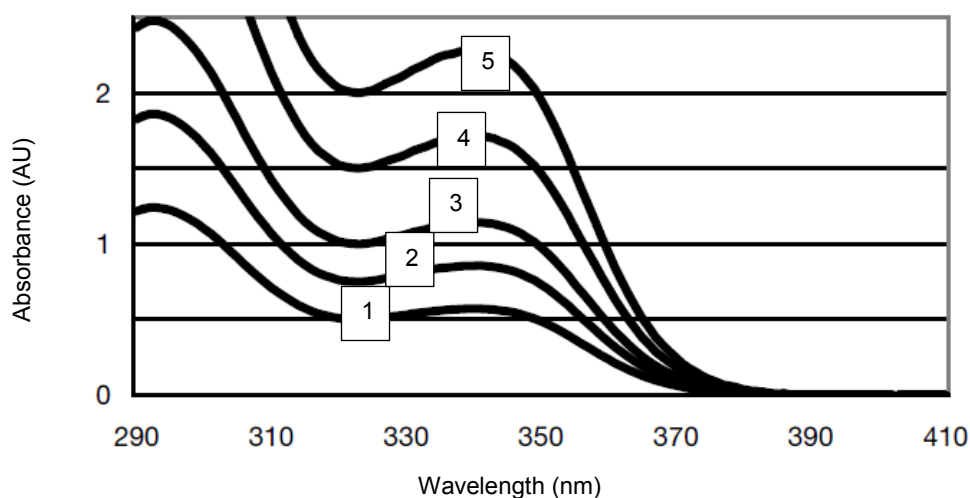
| | | |
|--------------------------|-------------------|--------------------------------|
| Appearance | | viscous yellow to amber liquid |
| Viscosity at 20°C (68°F) | cps | ~ 2,400 |
| Density at 20 °C (68°F) | g/cm ³ | 1.01 – 1.05 |
| Flash point | °C (°F) | 47 - 51 (117 - 124) |

Miscibility

Tinuvin 5248 is miscible with most common organic solvents, easy to incorporate into water-based systems by use of co-solvents.

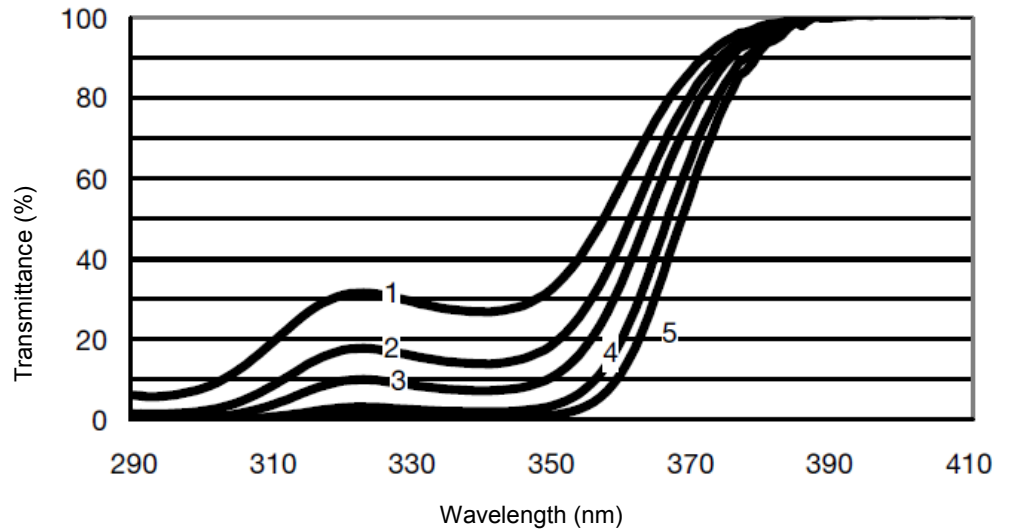
These typical values should not be interpreted as specifications.

UV Absorbance Spectrum (toluene, light path length = 1 cm)



UV Transmission Spectrum

(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 recorded in toluene, light path length = 1 cm)



- Line one: 40 mg/l (0.004% Tinuvin 5248 corresponds to 1.00% active in 40 µm film)
Line two: 60 mg/l (0.006% Tinuvin 5248 corresponds to 1.50% active in 40 µm film)
Line three: 80 mg/l (0.008% Tinuvin 5248 corresponds to 2.00% active in 40 µm film)
Line four: 120 mg/l (0.012% Tinuvin 5248 corresponds to 3.00% active in 40 µm film)
Line five: 160 mg/l (0.016% Tinuvin 5248 corresponds to 4.00% active in 40 µm film)

Applications

Tinuvin 5248 is especially suitable for clear coatings with a layer thickness from 40 – 80 µm and low pigmented coatings exposed to high baking temperatures and/or to extreme environmental conditions.

Tinuvin 5248 is recommended for applications such as:

- Non-acid, catalyzed automotive and transportation coatings
- General industrial coatings
- Architectural coatings (i.e. floor or cement coatings)
- Heavy-duty maintenance and marine coatings
- Adhesives and sealants

- Thermoplastics such as acrylic, vinylic
- 1K and 2K PUR such as acrylic/NCO, PES/NCO
- Epoxy/carboxy such as amine and/or metal catalyzed
- UV and EB curable coatings

Binder systems

Processing

The basic HALS component can undergo acid/base interactions with paint components such as biocides, surfactants, and pigments. It can also interfere with acid-catalyzed, crosslinking reactions or retard the curing of some air-drying systems (e.g. alkyds or oil-based paints).

Recommended concentrations

The amount of Tinuvin 5248 required for optimum performance should be determined in laboratory trials covering a concentration range.

The concentration of Tinuvin 5248 depends on dry film thickness (DFT), pigmentation, and desired protection.

| <u>Dry film thickness</u> | <u>By weight on binder solids</u> |
|---------------------------|-----------------------------------|
| 40 µm – 60 µm: | 6.0 – 4.0% |
| 60 µm – 80 µm: | 4.0 – 3.0% |

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 5248.

Storage

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

Important

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