Tinuvin® 477-DW ECO

Product description

Tinuvin® 477-DW ECO is an aqueous preparation of a triazine-based UV absorber for coatings, adhesives and sealant applications. It is designed to meet highest performance and durability requirements of indoor and exterior (in combination with a HALS) water-based wood coatings, industrial and architectural coatings, including radiation curable systems.

Key benefits

- Red-shifted spectral absorbance.
- Excellent long-term performance (photo-permanence).
- Good thermal stability.
- Non-migrating.
- Fully preserves dry-film properties such as inherent color, transparency and gloss.
- Does not affect other film properties such as water-sensitivity, blocking resistance, hardness and scratch resistance.
- Stir-in product: mixes easily in broad spectrum of water-based systems without applying high shear forces, disperses homogeneously without addition of co-solvents or any other dispersing aids.
- No settling behavior upon storage.
- No EUH 208 label, no MIT, no zinc pyrithione.

Chemical nature

Dispersion of UV absorber

Properties

Physical form

Yellowish dispersion

Technical data
(not supply specification)

Active content		~ 20.0 %
Solid content		~ 40.0 %
Viscosity, dynamic	DIN 53019 (20 °C, 100 1/s)	~ 7 Pa.s
Density	DIN EN ISO 2811-3, 20 °C	~ 1.056 g/cm^3
pH value		6.0 – 9.5

Application

Tinuvin® 477-DW ECO is suitable in all water-based formulations whose pH is comprised between 4.5 and 12.0 (e.g., acrylics and 1K/2K PUD) and where a high UV protection is needed.

For an improved protection of light-colored woods (pine, fir, spruce…), Tinuvin® 477-DW ECO can be combined with Lignostab® 1198 (or Lignostab® 1198 L). Tinuvin® 477-DW ECO being added in the topcoat, while Lignostab® 1198 is added in the pretreatment.

For outdoor applications, Tinuvin® 477-DW ECO must be combined with a hindered amine light stabilizer like Tinuvin® 123-DW ECO or Tinuvin® 249-DW ECO.

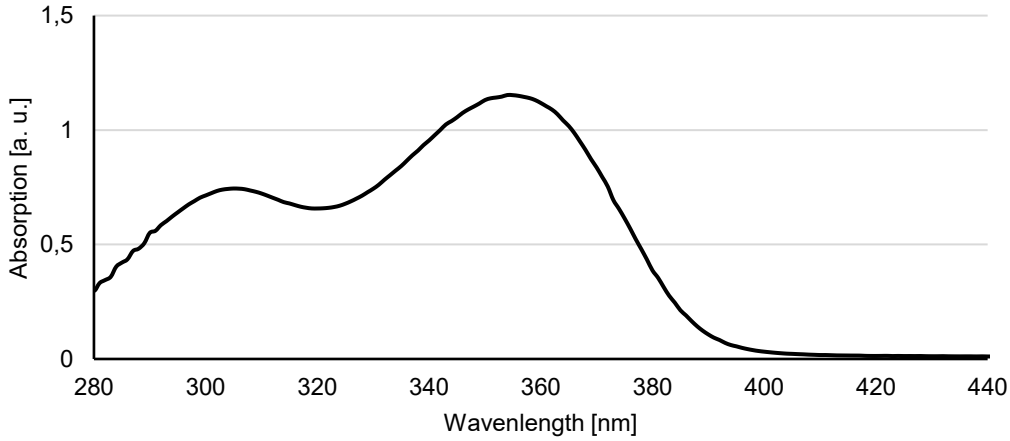
- High performance exterior joinery coatings
- Industrial wood coatings (furniture and flooring)
- Professional and DIY wood coatings
- Overprint varnishes over metal, board, paper, laminates
- Glass coatings and glass bonding layers
- Adhesives and bonding layers
- Water-based 1K and 2K PUR (acrylic/NCO, PES/NCO…)
- Water-based acrylics, acrylic/alkyd hybrids and PUD
- Water-based thermosetting (acrylic/melamine, PES/melamine…)
- Water-based UV-curable systems

Formulation guideline

The concentration of Tinuvin® 477-DW ECO depends on the dry-film thickness and on the desired protection. The amount required for optimum performance should be determined in trials covering a concentration range.

Dry-film thickness [µm]:	**Addition of Tinuvin® 477-DW ECO [% active on total binder solid content]:**
40	2.0 – 3.0
60	0.5 – 2.0

Tinuvin® 477-DW ECO
100.0 mg/L delivery form in toluene/THF (20/80) = 20.0 mg/L active



Storage

When kept in original un-opened containers and at a temperature between +5 °C and +35 °C, Tinuvin® 477-DW ECO can be stored up to 18 months from date of manufacture.

Stir thoroughly before use.

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

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