

Industrial Coatings

Technical Data Sheet

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 pentamethyl piperidine HALS

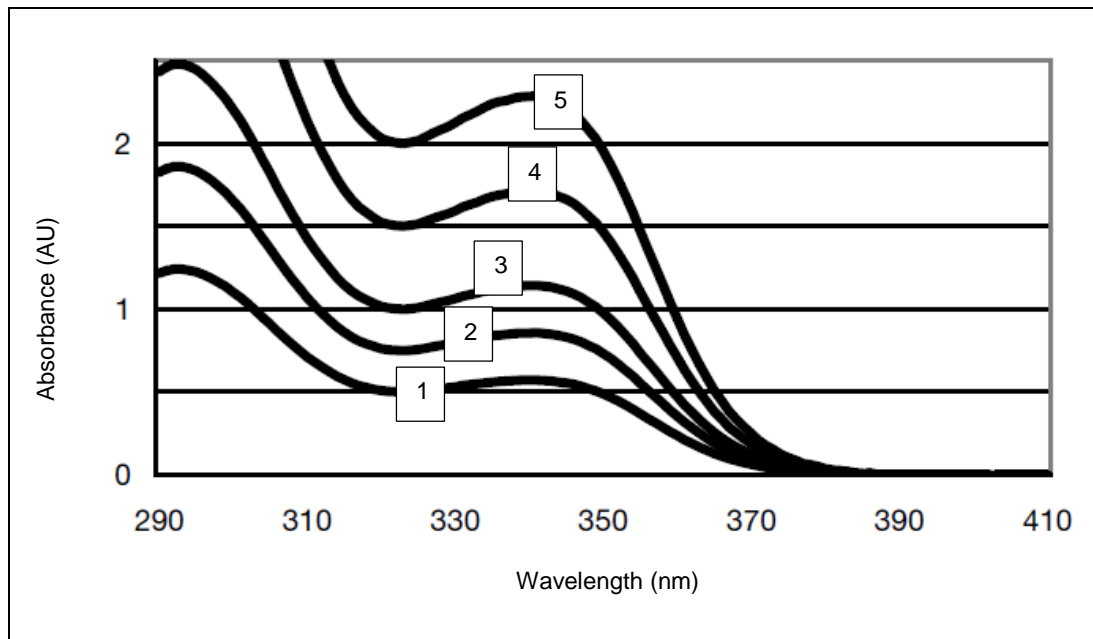
Properties

Typical Properties

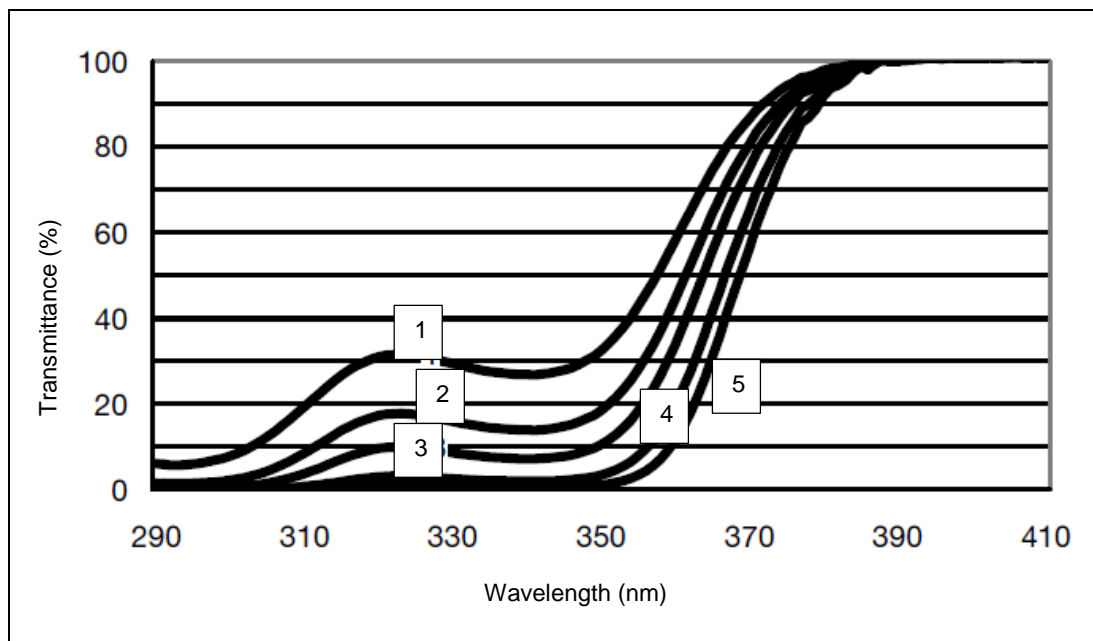
Appearance	viscous yellow to amber liquid
Viscosity at 20°C (68°F)	~ 2,400 cps
Density at 20 °C (68°F)	1.01 – 1.05 g/cm ³
Flash point	47 - 51°C (117 - 124°F)
Miscibility	Tinuvin [®] 5248 is miscible with most common organic solvents, easy to incorporate into water-based systems by use of co-solvents.

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

Binder systems

- 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

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 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 measures 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 Tinuvin® 5248.

Storage

Properly stored and protected, an unopened container of Tinuvin® 5248 should have a shelf life of at least 24 months from the date of manufacture. Keep away from frost. Store between 5 – 30°C.

Important

While the descriptions, designs, data and information contained herein are presented in good faith and believed to be accurate, they are provided for guidance only. Because many factors may affect processing or application/use, BASF recommends that the reader make tests to determine the suitability of a product for a particular purpose prior to use. **NO WARRANTIES OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE MADE REGARDING PRODUCTS DESCRIBED OR DESIGNS, DATA OR INFORMATION SET FORTH, OR THAT THE PRODUCTS, DESCRIPTIONS, DESIGNS, DATA OR INFORMATION MAY BE USED WITHOUT INFRINGING THE INTELLECTUAL PROPERTY RIGHTS OF OTHERS.** In no case shall the descriptions, information, data or designs provided be considered a part of BASF's terms and conditions of sale. Further, the descriptions, designs, data, and information furnished by BASF hereunder are given gratis and BASF assumes no obligation or liability for the descriptions, designs, data or information given or results obtained all such being given and accepted at the reader's risk.

Tinuvin is a registered trademark of BASF Group.

© BASF Corporation, 2016



BASF Corporation is fully committed to the Responsible Care® initiative in the USA, Canada, and Mexico. For more information on Responsible Care® go to:
U.S.: www.basf.us/responsiblecare_usa
Canada: www.basf.us/responsiblecare_canada
México: www.basf.us/responsiblecare_mexico

U.S & Canada

BASF Corporation
24710 W Eleven Mile Road
Southfield, MI 48033
ph: 1(800) 231-7868
fax:1(800) 392-7429
Email: Custserv_charlotte@basf.com
Email: edtech_info@basf.com
www.basf.us/dpsolutions

Mexico

BASF Mexicana, S.A. de C.V.
Av. Insurgentes Sur # 975
Col. Ciudad de los Deportes
C.P. 03710
Mexico, D.F.
Phone: (52-55) 5325-2756
Fax: (52-55) 5723-3011