

# Tinuvin<sup>®</sup> 400

## Product Description

Tinuvin 400 is a liquid hydroxyphenyl-triazine (HPT) UV absorber designed to fulfill the high performance and durability needs of solventborne, and 100% solids automotive and industrial finishes. Its low color and stability make it an excellent choice for all coatings where low color characteristics are ideal.

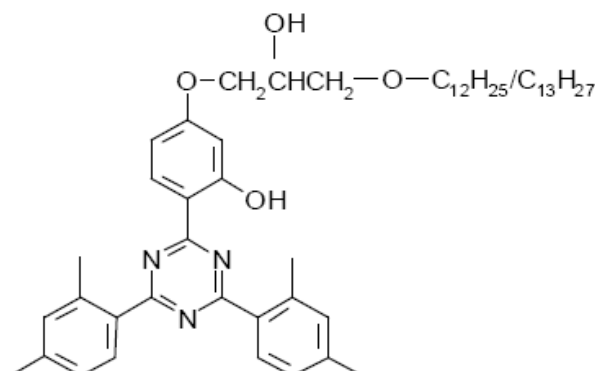
## Key Features & Benefits

- Hydroxyphenyl-triazine with high absorbance in the UV-B region
- Low color, low migration
- Minimal interaction with metal catalysts and amine crosslinkers
- Excellent photo-permanence

## Chemical Structure

Tinuvin 400 is a mixture of: 2-[4-[(2-Hydroxy-3-dodecyloxypropyl)oxy]-2-hydroxyphenyl]-4,6-bis(2,4-dimethylphenyl)-1,3,5-triazine & 2-[4-[(2-Hydroxy-3-tridecyloxypropyl)oxy]-2-hydroxyphenyl]-4,6-bis(2,4-dimethylphenyl)-1,3,5-triazine

Tinuvin 400 is an 85% solution of the active substance in 1-methoxy-2-propanol



## Properties

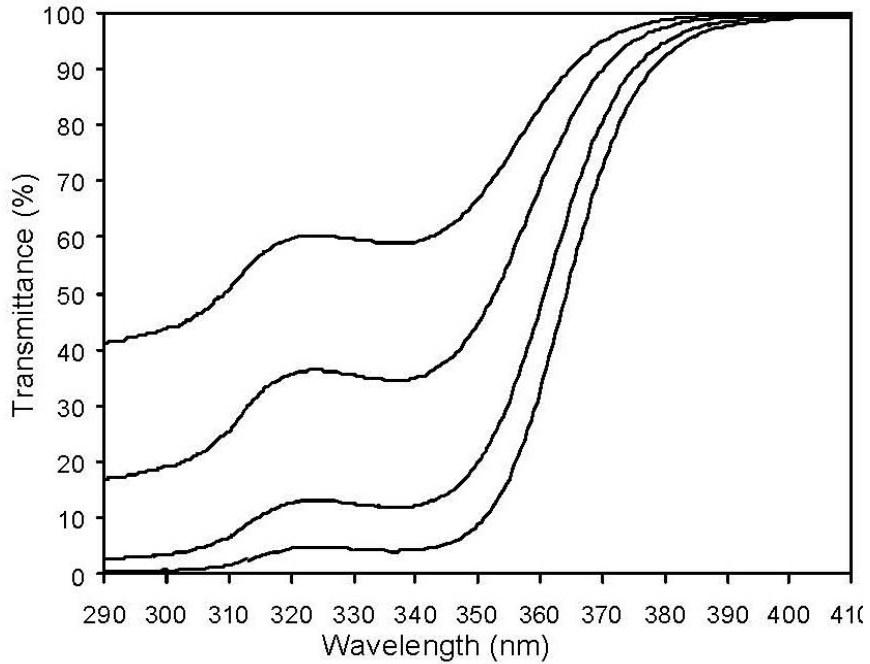
### Typical Properties

CAS No:	Active Substance	153519 – 44 – 9
	1-Methoxy-2-propanol	107 – 98 – 2
Appearance		light yellow viscous liquid
Molecular weight		~ 647 avg.
Density	g/cm <sup>3</sup>	1.07

Miscible with most customary organic solvents; practically immiscible with water.

These typical values should not be interpreted as specifications.

**Transmittance Spectrum**  
(in chloroform, cell thickness = 1 cm)



Top Line: 0.001% Tinuvin 400, corresponds to 0.25% in a 40 μ film  
 Second Line: 0.002% Tinuvin 400, corresponds to 0.50% in a 40 μ film  
 Third Line: 0.004% Tinuvin 400, corresponds to 1.00% in a 40 μ film  
 Bottom Line: 0.006% Tinuvin 400, corresponds to 1.50% in a 40 μ film

**Applications**

Tinuvin 400 a liquid hydroxyphenyl-triazine (HPT) UV absorber that provides excellent performance in coatings due to:

- very high thermal stability and performance for coatings exposed to high bake cycles and/or extreme environmental conditions
- hydroxy functionality to minimize migration
- high photo-stability for long life performance
- high concentration for maximum efficiency

Tinuvin 400 has been developed as an interaction-free UV absorber for use in amine and/or metal catalyzed coating systems and coatings applied on base-coats or substrates containing such catalysts.

Tinuvin 400 is recommended for solventborne automotive OEM and refinish coating systems, UV cured coatings, and industrial coatings where long life performance is essential. In addition, Tinuvin 400 is ideal for exterior construction coatings (roofing, etc.), construction adhesives, and sealants

The protective effects of Tinuvin 400 can be enhanced when used in combinations with a HALS such as Tinuvin 123, Tinuvin 249 or Tinuvin 292. These combinations improve the durability of clear coats by retarding gloss reduction, delamination, cracking, and blistering.

The amount of Tinuvin 400 required for optimum performance should be determined in laboratory trials covering a concentration range.

<b>Recommend Concentrations</b>	1.0 – 3.0 %	Tinuvin 400
	+	
	0.5 – 2.0 %	Tinuvin 123, Tinuvin 152, or Tinuvin 292

(concentrations are based on weight percent binder solids)

## **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 400.

---

## **Storage**

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

---

## Important

The descriptions, designs, and data contained herein are presented for your guidance only. Because there are many factors under your control which may affect processing or application/use it is necessary for you to make appropriate tests to determine whether the product is suitable for your particular purpose prior to use. **NO WARRANTIES OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE MADE REGARDING PRODUCTS DESCRIBED OR DESIGNS, OR INFORMATION SET FORTH, OR THAT THE PRODUCTS, DESIGNS, OR DATA MAY BE USED WITHOUT INFRINGING THE INTELLECTUAL PROPERTY RIGHTS OF OTHERS. IN NO CASE SHALL THE DESCRIPTIONS, DATA OR DESIGNS PROVIDED BE PRESUMED TO BE A PART OF OUR TERMS AND CONDITIONS OF SALE.** Further, you expressly understand and agree that the descriptions, designs, and data furnished by BASF hereunder are given gratis and BASF assumes no obligation or liability for same or results obtained from use thereof, all such being given to you and accepted by you at your risk.

*Tinuvin is a registered trademark of BASF Group.*

© BASF Corporation, 2019



**Responsible Care®**  
*Good Chemistry at Work*

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](http://www.basf.us/responsiblecare_usa)

Canada: [www.basf.us/responsiblecare\\_canada](http://www.basf.us/responsiblecare_canada)

México: [www.basf.us/responsiblecare\\_mexico](http://www.basf.us/responsiblecare_mexico)

BASF Corporation  
Dispersions and Resins  
11501 Steele Creek Road  
Charlotte, North Carolina 28273  
Phone: (800) 251 – 0612  
Email: [CustCare-Charlotte@basf.com](mailto:CustCare-Charlotte@basf.com)  
Email: [edtech-info@basf.com](mailto:edtech-info@basf.com)  
[www.basf.us/dpsolutions](http://www.basf.us/dpsolutions)