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Tinuvin® 329

Product Description

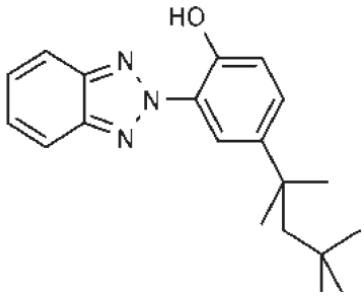
Tinuvin 329 is a UV absorber of the hydroxyphenyl-benzotriazole class used as a light stabilizer for plastics and other organic substrates.

Key Features & Benefits

- Hydroxyphenyl-benzotriazole UVA with excellent spectral coverage in the UV region
- Good photopermanence
- Improves exterior durability of ambient and low temperature cured coatings

Chemical Structure

2phenol, 2-(2H-benzotriazol-2-yl)-4-(1,1,3,3,-tetramethylbutyl)



Properties

Typical Properties

Appearance		slightly yellow powder
CAS No:		3147 – 75 – 9
Molecular weight	g/mol	329
Melting range	°C	103 – 105
Flash point	°C	> 150
Density at 20°C	g/ml	1.18
Vapor pressure at 25°C	Pa	1 E-5

Solubility at 20°C (g/100 g solution):

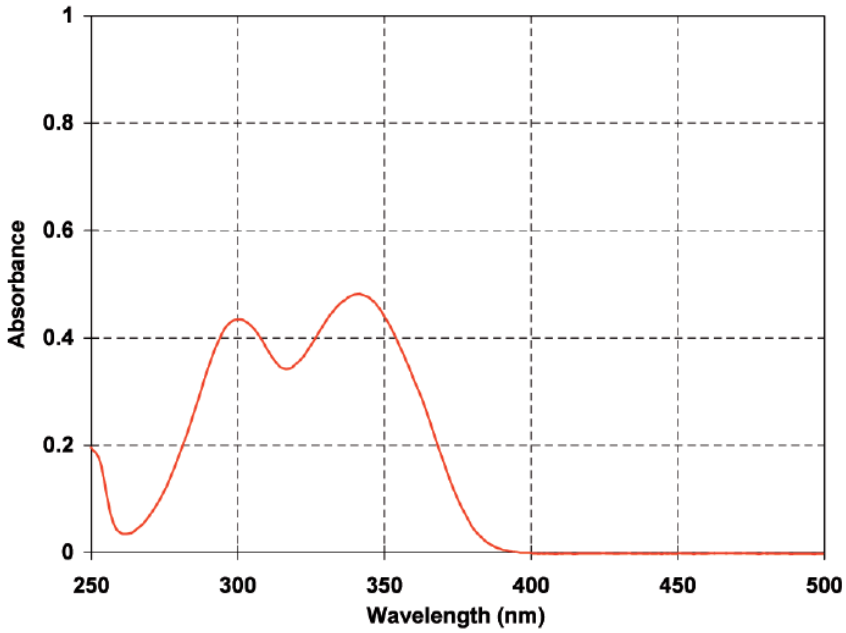
acetone	9
benzene	32
chloroform	37
cyclohexane	15
ethyl acetate	15
n-hexane	6
methanol	0.6
water	< 0.01

Volatility (TGA, air at 20°C/min)

Temperature at 1.0% weight loss	°C	180
Temperature at 2.0% weight loss	°C	200
Temperature at 5.0% weight loss	°C	220

These typical values should not be interpreted as specifications.

Absorbance Spectrum
(in 10 mg/l chloroform)



Tinuvin 329 exhibits strong absorbance in the 300 – 400 nm region and minimal absorbance in the visible region (> 400 nm) of the spectrum. The absorption maxima are at 301 nm and 343 nm (ε = 15910 l/mol · cm) in chloroform solution.

Applications

Tinuvin 329 is an effective light stabilizer for a variety of plastics, adhesives and other organic substrates. It protects polymers from UV energy, helping to preserve the original appearance and physical integrity of molded articles, films, sheets and fibers from outdoor weathering.

Processing

Tinuvin 329 can be used alone or in combination with other additives such as hindered amine light stabilizers (HALS), antioxidants (hindered phenols, phosphites, thiosynergists, hydroxylamines) and other functional stabilizers and additives.

The use of Tinuvin 329 in combination with HALS is particularly noteworthy in that a synergistic performance is often observed.

The amount of Tinuvin 329 required for optimum performance should be determined in laboratory trials covering a concentration range.

Recommend Concentrations

Typical use levels range between 1.0 and 3.0%, depending on the substrate and performance requirements of the final applications.

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 329.

Storage

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

Important

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