We create chemistry

® = registered Trademark of BASF SE

Tinuvin® 329

Benzotriazole UV Absorber

Characterization

Tinuvin 329 is an ultraviolet light absorber (UVA) of the hydroxyphenyl benzotriazole class, which is used as a light stabilizer for plastics and other organic substrates.

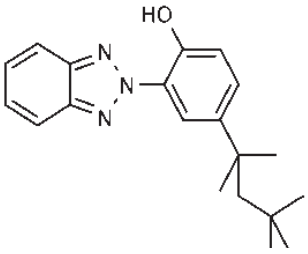
Chemical name

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

CAS number

3147-75-9

Chemical formula



Molecular weight

323 g/mol

Applications

Tinuvin 329 is an effective light stabilizer for a variety of plastics and other organic substrates.

Features/benefits

Tinuvin 329 protects polymers from UV radiation, helping to preserve the original appearance and physical integrity of molded articles, films, sheets, and fibers during outdoor weathering.

Product forms

Tinuvin 329	Slightly yellow powder
Tinuvin 329 FL	Slightly yellow, rodlike granules

Guidelines for use

The use levels of Tinuvin 329 range between 0.1 and 1.0 %, depending on substrate and performance requirements of the final application. The product can be used alone or in combination with other additives such as light stabilizers (hindered amines), antioxidants (hindered phenols, phosphites, thiosynergists, hydroxylamines), and other functional stabilizers and additives. The use of Tinuvin 329 in combination with hindered amine light stabilizers is particularly noteworthy in that a synergistic performance is often observed. Performance data of Tinuvin 329 alone or in combination with other additives are available in selected substrates.

Physical Properties

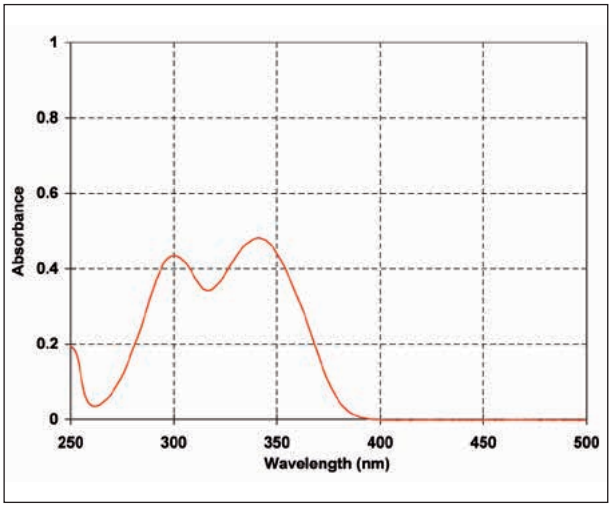
Melting Range	103 – 105 °C
Flashpoint	> 150 °C
Density (20 °C)	1.18 g/ml
Vapor Pressure (25 °C)	1 E-5 Pa

Solubility (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 (pure substance; TGA, heating rate 20 °C/min in air)

Weight Loss %	Temperature °C
1.0	180
2.0	200
5.0	220

Absorbance spectrum
(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.

Handling & Safety

Tinuvin 329 exhibits a very low order of oral toxicity and does not present any abnormal problems in its handling or general use.

Detailed information on handling and any precautions to be observed in the use of the product(s) described in this leaflet can be found in our relevant health and safety information sheet.

Note

March 2011

BASF Schweiz AG
Performance Chemicals/Plastic Additives
Klybeckstrasse 141
4057 Basel, Switzerland