Ciba ® TINUVIN® 329

Benzotriazole UV Absorber

Characterization

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

Chemical Name

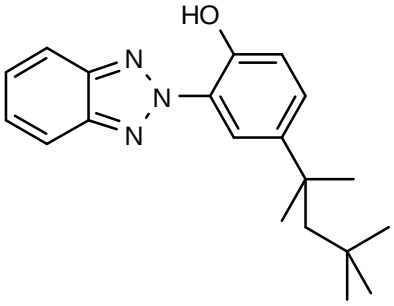
2-(2H-benzotriazol-2-yl)-4-(1,1,3,3-tetramethylbutyl)phenol

CAS Number

3147-75-9

Structure

TINUVIN 329



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

Code:	Appearance:
TINUVIN 329	slightly yellow powder
TINUVIN 329 FL	slightly yellow, rodlike granules

Guidelines for use

The use levels of TINUVIN 329 range between 0.10 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, lactones), 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

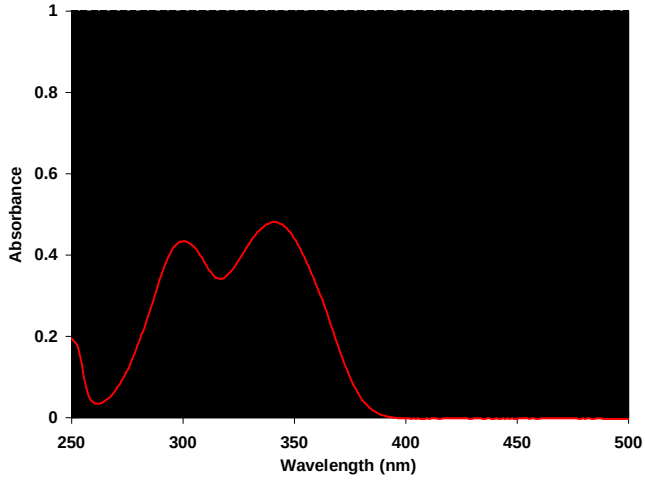
Melting Range	103-105°C

Flashpoint	> 150 °C
Specific Gravity (20 °C)	1.18 g/cm^3
Vapor Pressure (25°C)	1 E-5 Pa
Solubility (20 °C)	% w/w
Water	< 0.01
Acetone	9
Benzene	32
Chloroform	37
Cyclohexane	15
Ethyl acetate	15
n-Hexane	6
Methanol	0.6
Methylene chloride	38

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

Weight loss (%)	Temperature (°C)
1.0	180
2.0	200
5.0	220

Absorption 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

In accordance with good industrial practice, handle with care and prevent contamination of the environment. Avoid dust formation and ignition sources.
For more detailed information please refer to the material safety data sheet.

Registration

TINUVIN 329 is listed on the following Inventories:

Australia:	AICS	Canada:	DSL	Europe:	EINECS
Japan:	MITI	Korea:	ECL	Philippines:	PICCS
USA:	TSCA				

TINUVIN 329 is approved in many countries for use in food contact applications.
For detailed information refer to our Positive List or contact your local sales office.