Hunan Chemical BV

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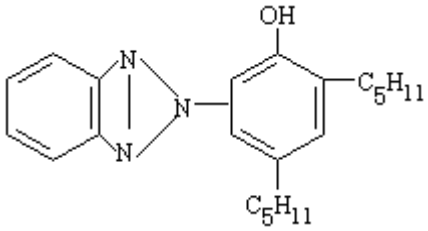
Trade registration nr. 50769421 Chamber of Commerce Amsterdam

Technical Data Sheet

Product name:	UV-328
Product Form:	Crystalline powder or pellet
Chemical name:	2-(2'-Hydroxy-3',5'-di-tert-pentylphenyl)-benzotriazole
Synonym:	Tinuvin 328
CAS No:	25973-55-1
EINECS No:	247-384-8
Molecular formula:	$C_{22}H_{29}N_3O$
Molecular weight:	351.50
IUPAC Name:	2-(benzotriazol-2-yl)-4,6-bis(2-methylbutan-2-yl)phenol

Chemical Structure:



Specification:

Appearance:	light yellowish powder or pellet
Melting Point (°C):	81 min.
Ash (%):	0.05 max.
Volatile matter (%):	0.5 max.
Transmittance:	
440 nm (%):	97 min.
500 nm (%):	98 min.
Assay (%):	99.0 min.

Characterization:

UV-328 is an ultraviolet light absorber (UVA) of the hydroxyphenylbenzotriazole class, which imparts outstanding light stability to plastics and other organic substrates.

Applications:

UV-328 is a highly effective light stabilizer for a variety of plastics and other organic substrates. Its use is recommended for the stabilization of styrene homo- and copolymers, acrylic polymers, unsaturated polyesters, polyvinylchloride, polyolefins, polyurethanes, polyacetals, polyvinyl butyral, elastomers, and adhesives

Features/benefits:

UV-328 features strong UV absorption, low initial color, excellent compatibility in a wide variety of substrates, good solubility in plasticizers and monomers, and moderately low volatility. It protects polymers as well as organic pigments from UV radiation, helping to preserve the original appearance and physical integrity of molded articles, films, sheets, and fibers during outdoor weathering.

Guidelines for use:
The use levels of UV-328 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 UV-328 in combination with hindered amine light stabilizers is particularly noteworthy in that a synergistic performance is often observed. Performance data for UV-328 alone and in combination with other additives are available in a variety of substrates.

Physical Properties:

Melting Range	80-88 °C
Flashpoint	229 °C
Specific Gravity (20 °C)	1.17 g/cm3
Vapor Pressure (20 °C)	4.7 E-6 Pa

Solubility (20 °C)	**% w/w**
Water	< 0.01
Acetone	6
Benzene	39
Chloroform	44
Cyclohexane	15
Ethyl acetate	16
n-Hexane	16
Methanol	0.4
Methylene chloride	56

Volatitility	**Pure substance; TGA, heating rate 20 °C/min in air**
Weight Loss (%)	Temperature °C
1.0	183
2.0	202
5.0	223

UV-328 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 306 nm and 347 nm (e = 14760 l/mol·cm) in chloroform solution.

Handling & Safety:
In accordance with good industrial practice, handle with care and avoid unnecessary personal contact. Avoid continuous or repetitive breathing of dust. Use only with adequate ventilation.

Prevent contamination of the environment. Avoid dust formation and ignition sources. For more detailed information please refer to the material safety data sheet.

Packing:
In 15/20/25/500kg bags/cartons on pallet or fiber drum