



SINO GREAT ENTERPRISE LTD.

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DETAILED TECHNICAL DATA SHEETS

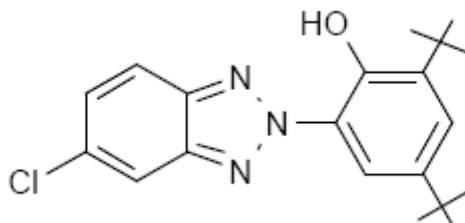
Product name: UV absorber- 327

General: UV absorber 327 is a ultraviolet light absorber of the hydroxyphenylbenzotriazole class, which imparts outstanding light stability to plastics and other organic substrates. The UV absorbance of the product is red-shifted relative to conventional benzotriazole UV absorbers, i.e. it exhibits enhanced absorption of long-wavelength UV radiation (>350 nm).

Chemical name: 2-(2'-Hydroxy-3',5'-di-tert-butylphenyl)-5-chlorobenzotriazole

CAS number: 3864-99-1

Chemical Structure: UV absorber -327



Molecular weight: 357.9 g/mol

Application

UV absorber- 327 is a highly effective light stabilizer for a variety of plastics and other organic substrates. Due to its red-shifted UV absorption, it is particularly suited for use in the stabilization of polymers that are especially sensitive to long-wavelength UV radiation (e.g. polyurethanes, polyphenylene sulfide) and in certain applications where very low transmission of long-wavelength UV radiation is required (e.g. optical lenses). Its use is recommended in a variety of polymers and organic substrates, including acrylic polymers, polycarbonate, polyesters, styrene homo- and copolymers, unsaturated polyesters, polyvinylchloride, polyolefins, polyvinyl butyral, elastomers, and adhesives.

Features/benefits

UV absorber -327 features strong UV absorption, excellent compatibility in a wide variety of substrates, 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.

Product forms: Code: UV absorber -327
Appearance: Slightly yellow powder

Guidelines for use:

The use levels of UV absorber-327 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

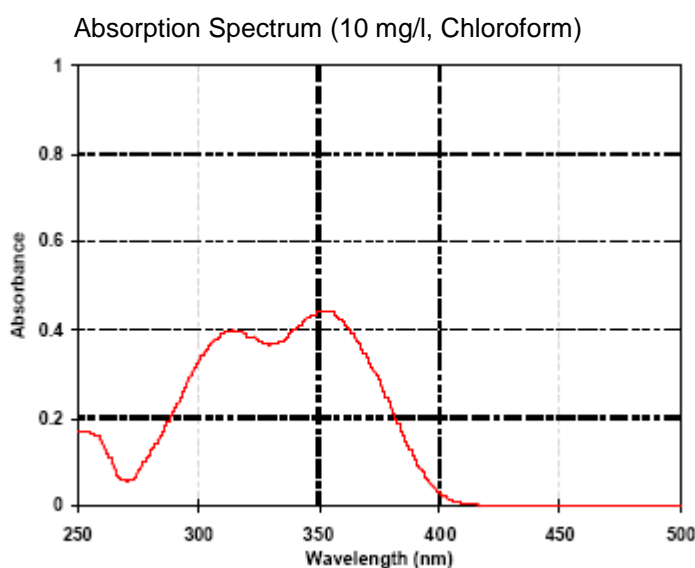
other additives such as light stabilizers (hindered amines, conventional benzotriazole UV absorbers), antioxidants (hindered phenols, phosphites, thiosynergists, hydroxylamines, lactones), and other functional stabilizers. The use of UV absorber- 327 in combination with hindered amine light stabilizers is particularly noteworthy in that a synergistic performance is often observed. Performance data for UV absorber- 327 alone and in combination with other additives are available in a variety of substrates.

Physical Properties

Melting Range	154-157°C
Flashpoint	234°C
Specific Gravity(20 °C)	1.26g/ml
Vapor pressure(20 °C)	1.1E-6Pa

Solubility(20°C)	% w/w
Water	<0.001
Acetone	1
Benzene	16
Chloroform	19
Cyclohexane	5
Ethyl Acetate	5
n-Hexane	4
Methanol	<0.1
Methylene chloride	17

Volatility	Pure substance; TGA, heating rate 20 °C/min in air
Weight Loss (%)	Temperature °C
1.0	190
2.0	205
5.0	225



UV absorber-327 exhibits strong absorbance in the 300-400 nm region and minimal absorption in the visible region (> 400 nm) of the spectrum. The absorption maxima are at 314 nm and 353 nm ($\epsilon = 15540 \text{ l/mol}\cdot\text{cm}$) in chloroform solution.

Safety and Handling

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.

Registration

UV absorber -327 is listed on the following inventories

Australia	AICS
Canada	DSL
China	First Import
Europe	EINECS
Japan	MITI
korea	ECL
Philippines	PICCS
USA	TSCA

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