Hunan Chemical BV

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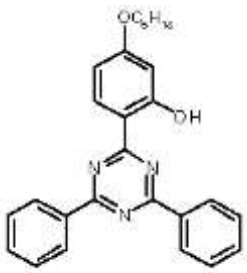
Trade registration nr. 50769421 Chamber of Commerce Amsterdam

Technical Data Sheet

Product name:	UV-1577
Product Form:	Powder
Chemical name:	2-(4,6-diphenyl-1,3,5-triazin-2-yl)-5-((hexyl)oxy)-phenol
Synonym:	Tinuvin 1577
CAS No:	147315-50-2
EINECS No:	411-380-6
Molecular formula:	$C_{27}H_{27}N_3O_2$
Molecular weight:	425
IUPAC Name:	2-(4,6-diphenyl-1,3,5-triazin-2-yl)-5-((hexyl)oxy)phenol

Structure formula:



Chemical Specification

Appearance:	Light yellow powder
Assay (HPLC) (%):	99.0 min.
Melting Point (°C):	148.0~149.0
Volatile Matter (%):	0.1 max.
Color of solution at 450nm (%):	87.0 min
Color of solution at 500nm (%):	98.0 min
Thermally stability at 450nm (%):	80.0 min.
Thermally stability at 500nm (%):	90.0 min.

Packing: in 20kg net fiber drum, 360kg per pallet or as required.

Characterization:

UV-1577 represents a new class of UV absorber exhibiting very low volatility and good compatibility with a variety of polymers, co-additives and resin compositions. It allows polycarbonates and polyesters to achieve a higher resistance to weathering than conventional benzotriazole UV absorbers.

Applications

UV-1577 applications include polyalkene terephthalates and naphthalates, linear and branched polycarbontes, modified polyphenylene ether compounds, and various high performance plastics.
The use of UV-1577 is indicated in polymer blends & alloys, such as PC/ABS, PC/PBT, PPE/IPS, PPE/PA and copolymers as well as in reinforced, filled and/or flame retarded compounds, which

can be transparent, translucent and/or pigmented. Its very low tendency to chelate allows UV-1577 formulations in polymers containing catalyst residues.

Features/benefits

UV-1577 is particularly suitable for processing and aging conditions where high loadings, low volatility and good compatibility are required. Such requirements are especially critical for complex moldings, fibers, plain and corrugated sheets, twin wall sheets, thin films, co-injected or coextruded semi-finished parts.
Depending on equipment, processing conditions, and polymer types, UV-1577 allows direct two-layer co-extrusion of sheets without the use of a neutral third top layer to prevent sublimation and/or deposits generated by the thin, highly UVA-loaded second layer. Moreover, its very high UVscreen actitivity allows the use of lower concentrations than with traditional UV absorbers. This may be of particular importance when using UV-1577 in high concentration applications.

Guidelines for use

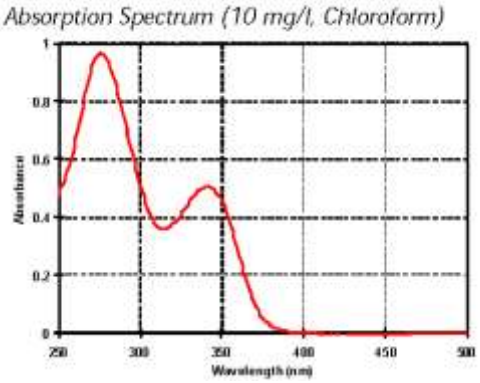
UV-1577 (0.2 - 6% by weight) can be readily incorporated into the polymer by using conventional techniques, e.g., powder, solution, or melt blending. UV-1577 can be used alone or in avariety of blends and combinations with antioxidants and other functional stabilizers where often a synergistic performance is observed.

Physical Properties

Melting Point	148 °C
Flashpoint	not applicable
Vapor Pressure (25 °C)	9 E-10 Pa

Solubility (20 °C)	% w/w
n-Hexane	0.7
Acetone	3.1
Methylene chloride	169
Chloroform	254
Toluene	51
Ethanol	0.2
Ethylacetate	6.6
Methylmethacrylate	1.5

Volatility	Pure substance; TGA, heating rate 20 °C/min in air
Weight Loss (%)	Temparature °C
1.0	300
5.0	335
10.0	353



UV-1577 exhibits strong absorbance in the 300 and minimal absorbance in the visible region (> 400 trum. The absorption maxima are at 274 nm and 341 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

UV-1577 is listed on the following Inventories:

Australia	AICS
Canada	DSL
Europe	ELINCS
Japan	MITI
Korea	ECL
USA	TSCA

UV-1577 is approved in many countries for use in food contact applications.