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Tinuvin® PUR 866

High Performance Light Stabilizer Package

Characterization

Tinuvin PUR 866 is a high performance UV stabilization package designed for polyurethane systems (e. g. TPU, CASE, RIM flexible foam applications). Tinuvin PUR 866 is particularly efficient in thermoplastic polyurethane (TPU). Tinuvin PUR 866 can also be used in polyurethane coatings on tarpaulin and flooring as well as in synthetic leather.

Chemical name

Proprietary

CAS number

Proprietary

Chemical formula

Proprietary

Molecular weight

Proprietary

Applications

Tinuvin PUR 866 provides outstanding UV stability to polyurethane systems. The increased effectiveness over conventional UV stabilizer systems is particularly pronounced in transparent or light colored TPU applications.

Tinuvin PUR 866 can also be used in other polymers such as polyamides and other engineering plastics including aliphatic polyketone, styrene homo- and copolymers, elastomers, TPE, TPV and epoxies as well as polyolefins and other organic substrates.

Features/benefits

Tinuvin PUR 866 offers superior performance and increased productivity over conventional light stabilization systems:

- Excellent initial color
- Superior color retention during UV exposure
- Enhanced long-term–thermal-stability
- Single-additive solution
- Easy dosable

Product forms

White to slightly yellow, free-flowing powder

Guidelines for use

Use levels for Tinuvin PUR 866 typically range between 0.1 % and 2.0 % depending on substrate and processing conditions. Tinuvin PUR 866 can be used alone or in combination with other functional additives such as antioxidants (hindered phenols, phosphites) and HALS light stabilizers, where often a synergistic performance is observed. Performance data of Tinuvin PUR 866 are available for various applications.

Physical Properties

Specific gravity (at 20 °C)	1.21 g/ml
Bulk density	0.40 g/ml
Angle of repose	47 °

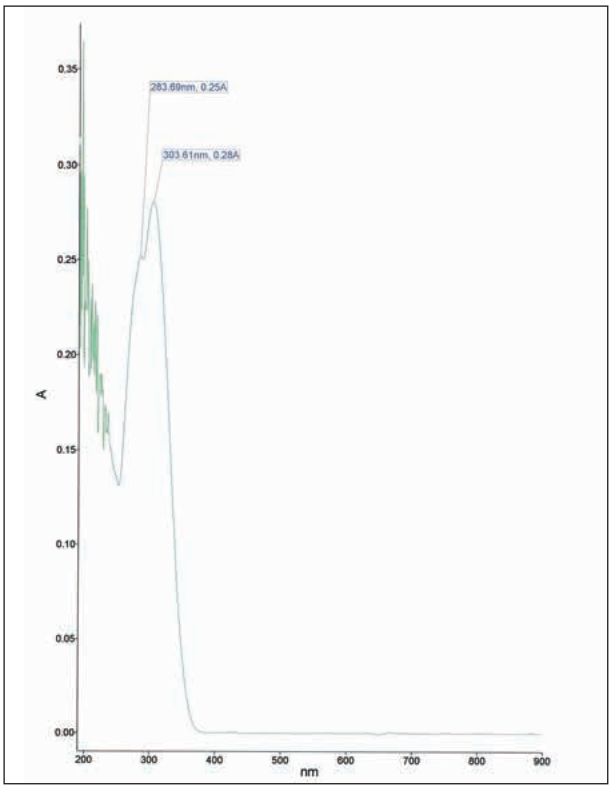
Solubility (25 °C):

g/100 g solution	
Acetone	7.5
Ethyl Acetate	9
Methanol	< 0.01
Methylene Chloride	29
Toluene	13

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

Weight loss %	Temperature °C
1.0	215
5.0	255
10.0	270

Absorbance spectrum
(10 mg/l, Chloroform)



Tinuvin PUR 866 exhibits high 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 (ε =14760 l/mol·cm) in chloroform solution.

Handling & Safety

Tinuvin PUR 866 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

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August 2015

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