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Tinuvin® PA 123

Liquid low molecular weight hindered amine NOR stabilizer

Characterization

Tinuvin PA 123 is a highly effective liquid NOR stabilizer based on an amino-ether functionality. Its low basicity is thus preventing possible interactions with acidic or other aggressive media. Tinuvin PA 123 is widely used to improve the weathering performance of a variety of polymers in a wide array of applications.

Chemical name

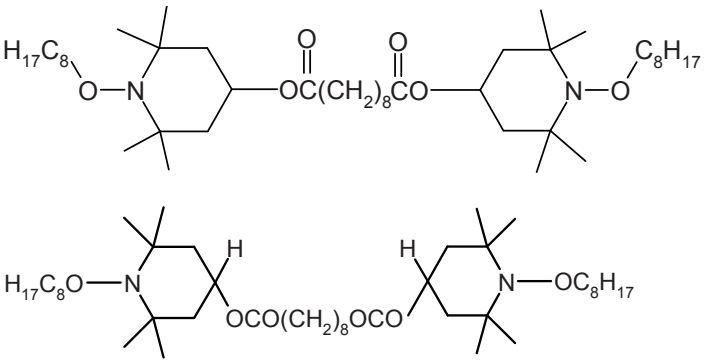
Decanedioic acid, bis(2,2,6,6-tetramethyl-1-(octyloxy)-4-piperidinyl)ester, reaction products with 1,1-dimethylethylhydroperoxide and octane

CAS number

129757-67-1

Structure

Tinuvin PA 123



Molecular weight

737 g/mol

Applications

Tinuvin PA 123 is a highly effective light stabilizer in a wide range of polymers and applications including acrylics, polyurethanes, sealants, adhesives, rubbers, impact modified polyolefin blends (TPE, TPO), vinyl polymers (PVC, PVB), polypropylene and unsaturated polyesters. Moreover, where potential interactions with other components of either the plastic formulation or the paint system can occur, Tinuvin PA 123 is particularly recommended.

Features/benefits

Tinuvin PA 123 provides outstanding stabilization performance, especially under critical conditions when in contact with aggressive media including acids, flame retardants, sulfur, and catalyst residues. Its liquid form provides ease of handling and incorporation as well as dosing accuracy. It is compatible with a wide array of substrates as well as a variety of co-additives including antioxidants, processing stabilizers, UV absorbers, other hindered amine stabilizers, optical brighteners, antistatic agents, fillers, colorants, etc.

Product forms

Code:	Tinuvin PA 123
Appearance:	clear, slightly yellow liquid

Guidelines for use

Use levels of Tinuvin PA 123 range between 0.05 % and 2.0 %, depending on the substrate as well as performance requirements. In many substrates a synergistic performance is observed when used in combination with a UV absorber.

For optimum effectiveness, adequate base stabilization of the polymer is necessary to prevent thermal oxidation.

Physical properties

Specific gravity (20 °C):	0.97 g/cm^3
Dynamic viscosity (20 °C):	2900 – 3100 mPa · s

Solubility (20 °C)	**% w/w**
Water	< 0.01

Volatility	**Pure substance;**
Weight loss (%)	**TGA, heating rate 20 °C/min in air**
	Temperature °C
0.4	150
0.7	175
1.3	200
3.6	225
13.8	250

Handling & Safety

In accordance with good industrial practice, handle with care and prevent contamination of the environment. Avoid continuous or repetitive breathing of vapor. Use only with adequate ventilation. For more detailed information please refer to the material safety data sheet.

Note

November 2010

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