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Tinuvin® 765

Liquid hindered amine light stabilizer

Characterization

Tinuvin 765 is a liquid hindered amine light stabilizer which is widely used to improve the weatherability of a variety of polymers.

Chemical name

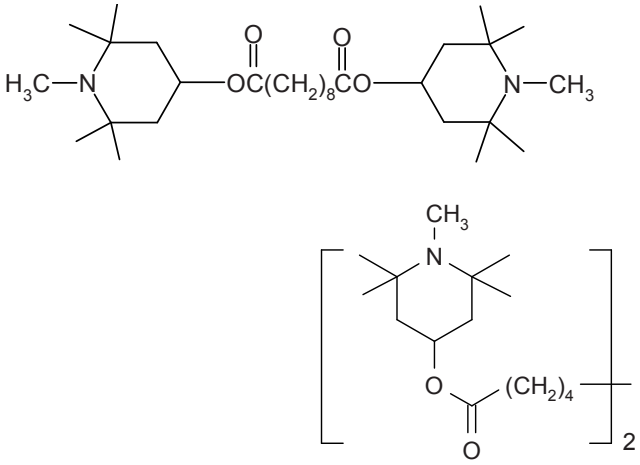
Bis(1,2,2,6,6-pentamethyl-4-piperidyl)sebacate + methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate

CAS number

41556-26-7 and 82919-37-7

Structure

Tinuvin 765



Molecular weight

508 g/mol and 370 g/mol

Applications

Tinuvin 765 is a highly effective liquid stabilizer used for a wide range of polymers and applications including polyurethanes, sealants, adhesives, elastomers, unsaturated polyesters, acrylics, vinyl polymers (PVB, PVC), styrene homo- and copolymers, polyolefins, liquid color concentrates, and other organic substrates.

Features/benefits

Tinuvin 765 provides outstanding performance and its liquid form provides ease of handling and incorporation. It is compatible in a wide array of substrates. Tinuvin 765 has low volatility and is thermally stable.

Product forms

Code: Liquid	Tinuvin 765
Appearance:	clear, slighlty yellow liquid

Guidelines for use

Use levels for Tinuvin 765 range between 0.1 % and 1.0 %, depending on the substrate and performance requirements. Synergistic performance may be obtained when Tinuvin 765 is used with an ultraviolet light absorber. Performance data are available in many substrates.

For optimum effectiveness, adequate base stabilization (e. g. antioxidants/ processing stabilizers) of the polymer is necessary to prevent thermal oxidation. Sulfur containing stabilizers such as thioethers have sometimes been found to have a negative effect on the performance of Tinuvin 765. Such influences should be evaluated in specific customer testing.

Tinuvin 765 may crystallize during storage below 0 °C, however the product can be easily liquified by slight warming.

Physical properties

Melting range:	not applicable
Flashpoint:	92 °C
Specific gravity (20 °C):	0.993 g/cm^3
Vapor pressure (20 °C):	1 E-4 Pa

Solubility (20 °C)	**% w/w**
Water	< 0.01
Acetone	> 50
Chloroform	> 50
Cyclohexane	> 50
Ethanol	> 50
Ethyl acetate	> 50
n-Hexane	> 50
Methanol	> 50
Dichloromethane	> 50
Toluene	> 50

Volatility	**Pure substance;**
Weight loss (%)	**TGA, heating rate 20 °C/min in air**
	Temperature (°C)
1.0	225
3.0	250
10.0	275

Handling & Safety

In accordance with good industrial practice, handle with care and avoid unnecessary personal contact. Protect skin. Avoid release to the environment.

For more detailed information please fer to the material safety data sheet.

Note

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