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Tinuvin® 144

Product Description

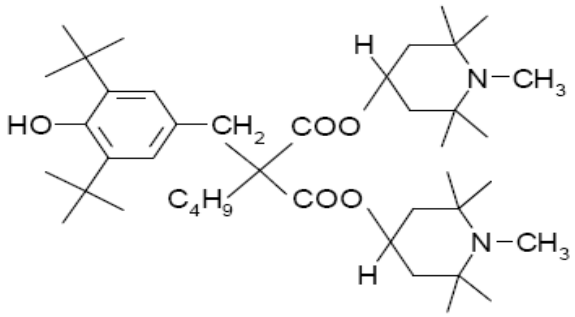
Tinuvin 144 is a light stabilizer of the hindered amine class (HALS) and also contains an antioxidant moiety of the sterically hindered phenol type. Its efficiency provides significantly extended life-time to coatings by minimizing paint defects such as cracking and loss of gloss.

Key Features & Benefits

- ***Multi-functional additive designed for use in powder coatings (HALS, antioxidant, and tribo agent)***
- ***Versatile product for PES and Epoxy/PES systems***
- ***Provides protection against thermal and light induced degradation***

Chemical Structure

Tinuvin® 144 is: *Bis* (1, 2, 2, 6, 6-pentamethyl-4-piperidinyl)-[[3, 5-bis (1, 1-dimethylethyl)-4-hydroxyphenyl]methyl]butylmalonate



Properties

Typical Properties

CAS No:		63843 – 89 – 0
Molecular weight		685
Appearance		white to slightly yellow powder
Melting range	°C	146 – 150
<u>Solubility (g/100 g solution) at 20 °C:</u>		
butylcarbitol		1.5
butanol		2.5
butyl acetate		10
ethylglycol		1.5
1-methoxypropylacetate-2		1
methylethylketone		9
Solvesso 100 [1]		10
Solvesso 150 [1]		5
xylene		10
water		<0.01

[1] trademark of Esso

* These typical values should not be interpreted as specifications.

Applications

Tinuvin 144 is recommended for applications such as:

- automotive coatings
- coil coatings
- powder coatings

The performance of Tinuvin 144 can be significantly improved when used in combination with a UV absorber such as recommended below. These synergistic combinations give superior protection against gloss reduction, cracking, blistering delamination and color change in coatings. Tinuvin 144 can also reduce yellowing caused by overbake.

The light stabilizers may be added in two-coat automotive finishes to the base and clear coat. However, according to our experience the optimum protection is achieved by adding the light stabilizer to the topcoat.

Possible interactions of Tinuvin 144 with paint ingredients such as acid catalysts should be carefully evaluated.

The amount of Tinuvin 144 required for optimum performance should be determined in laboratory trials covering a concentration range.

Recommend Concentrations

Clear coats & One-coat metallic shades:	0.5 - 1 %	Tinuvin 144
	+	
	1 - 3 %	Tinuvin 1130, Tinuvin 928, Tinuvin 384-2 or Tinuvin 405
One-coat solid shades:	1 - 2 %	Tinuvin 144
alone or in combination with	1 - 2 %	Tinuvin 1130, Tinuvin 900, Tinuvin 405 or Tinuvin 928

(concentrations are based on weight percent binder solids)

Safety

General

The usual safety precautions when handling chemicals must be observed. These include the measure described in Federal, State and Local health and safety regulations, thorough ventilation of the workplace, good skin care, and wearing of protective goggles.

Safety Data Sheet

All safety information is provided in the Safety Data Sheet for Tinuvin 144.

Storage

Please refer to the “Handling and Storage of Polymer Dispersions” brochure.

Important

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