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The Chemical Company

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Tinuvin® 783

Synergistic mixture of oligomeric hindered amine stabilizers

Characterization

Tinuvin 783 is a synergistic mixture of Chimassorb® 944 and Tinuvin 622. It is a versatile light stabilizer with good extraction resistance, low gasfading and low pigment interaction. Tinuvin 783 is particularly well suited for LDPE, LLDPE, HDPE films, tapes and thick sections and for PP films. It is also the product of choice for thick sections where indirect food contact approval is required.

Chemical name

Chimassorb 944: Poly[[6-[(1,1,3,3-tetramethylbutyl)amino]-1,3,5-triazine-2,4-diyl][(2,2,6,6-tetramethyl-4-piperidinyl)imino]-1,6-hexanediyl[(2,2,6,6-tetramethyl-4-piperidinyl)imino]])

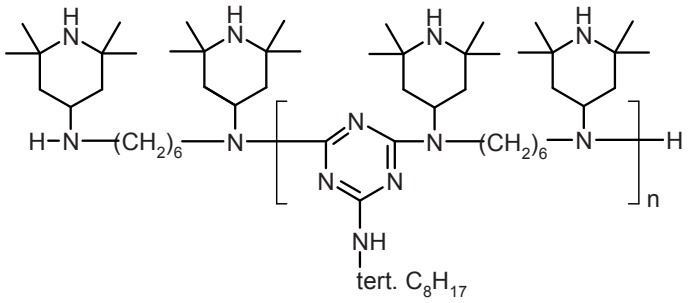
Tinuvin 622: Butanedioic acid, dimethylester, polymer with 4-hydroxy-2,2,6,6-tetramethyl-1-piperidine ethanol

CAS number

Preparation

Structure

Chimassorb 944



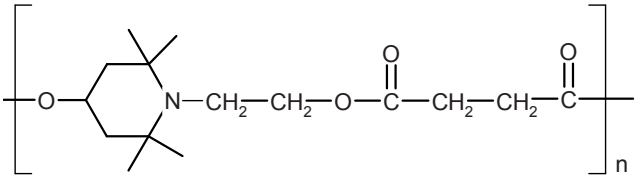
Molecular weight

M_n = 2000 – 3100 g/mol

Structure

Tinuvin 622

and



Molecular weight

M_n = 3100 – 4000 g/mol

Applications

Tinuvin 783 areas of application include polyolefins (PP, PE), olefin copolymers such as EVA as well as blends of polypropylene with elastomers, and PA.

Features/benefits

Tinuvin 783 is a versatile light stabilizer for thin and thick sections and delivers excellent cost/performance benefits. For applications requiring indirect food approvals, Tinuvin 783 can be used at levels not possible with other conventional HALS.

The synergism between the two high molecular weight HALS components of Tinuvin 783 helps to provide an efficient stabilization to the polymer against degradation through UV radiation and long term heat exposure.

Product forms

Code:	Tinuvin 783 FDL
Appearance:	white to slightly yellow pastilles

Guidelines for use

Thick sections*:	UV stabilization of HDPE, LLDPE, LDPE and PP	0.05 – 1 %
Films*:	UV stabilization of LLDPE and PP	0.1 – 1.0 %
Tapes:	UV stabilization of PP and HDPE	0.1 – 0.8 %
Fibers:	UV stabilization of PP	0.1 – 1.4 %

** The presence of a UV absorber (e. g. Tinuvin 326/328 or Chimassorb 81) is recommended in un-pigmented or slightly pigmented articles or to improve the light fastness of certain organic pigments.*

Physical properties

Melting range:	55 – 140 °C
Flashpoint (DIN 51758):	192 °C
Bulk density:	514 g/l

Handling & Safety

In accordance with good industrial practice, handle with care and avoid unnecessary personal contact. Avoid continuous or repetitive breathing of dust. Use only with adequate ventilation. Avoid dust formation and ignition sources.

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

Note

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BASF Schweiz AG
Performance Chemicals/Plastic Additives
Klybeckstrasse 141
4057 Basel, Switzerland