Technical Information
Plastic Additives

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Chimassorb® 944

Oligomeric hindered amine light stabilizer (HALS)

Characterization

Chimassorb® 944 is a high molecular weight hindered amine light stabilizer (HALS). It shows excellent compatibility, good resistance to extraction and low volatility.

Chemical name

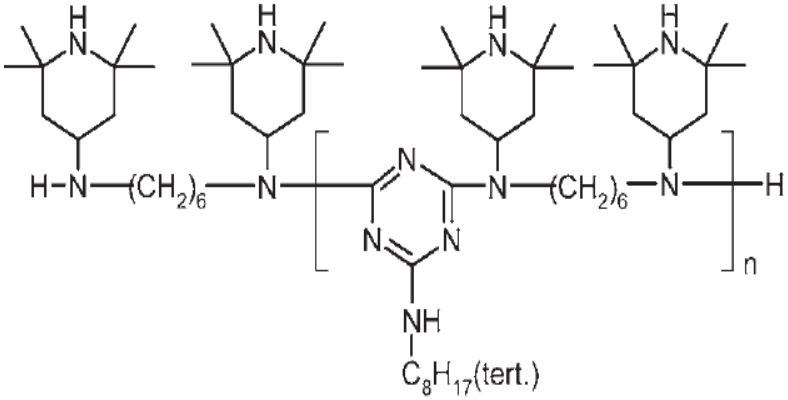
Poly[[6-[(1,1,3,3-tetramethylbutyl) amino] -1,3,5-triazine-2,4-diyl] [(2,2,6,6-tetramethyl-4-piperidinyl) imino] -1,6-hexanediyl[(2,2,6,6-tetramethyl-4-piperidinyl) imino]])

CAS number

71878-19-8
70624-18-9 (US)

Structure

Chimassorb® 944



Molecular weight

Mn = 2000 – 3100 g/mol

Applications

Chimassorb® 944 areas of application include polyolefins (PP, PE), olefin copolymers such as EVA as well as blends of polypropylene with elastomers.

In addition, in certain instances Chimassorb® 944 is highly effective in polyacetals, polyamides, polyurethanes, flexible and rigid PVC, as well as PVC blends, and in certain styrenic elastomer and adhesive specialty applications.

Features/benefits

Chimassorb® 944 imparts excellent light stability to thin articles, particularly fibers and films. In thick cross sections it is specifically suitable for polyethylene articles. Chimassorb® 944 is highly effective as a long-term thermal stabilizer in thin and thick articles and shows good extraction resistance.

Product forms

Code	Chimassorb® 944 FDL
Appearance	white to slightly yellowish granules
Code	Chimassorb® 944 LD
Appearance	white to slightly yellowish low dust powder

Guidelines for use

Fibers	UV Stabilization of PP	0.1 – 1.4 %
Tapes	UV Stabilization of PP and HDPE	0.10 – 0.8%
Thick sections	UV Stabilization of HDPE, LLDPE, LDPE and PP	0.05 – 1.0%
Films	UV Stabilization of LLDPE and LDPE	0.1 – 1.0 %

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

Physical Properties

Melting range	100-135 °C
Flashpoint (ASTM D-93)	> 150 °C
Specific gravity (20°C)	1.01 g/cm^3
Vapor pressure (20°C)	~ 1.0 E-6 Pa
Bulk density	
Chimassorb® 944 FDL	560 – 610 g/l
Chimassorb® 944 LD	450 – 550 g/l

Solubility (20°C)	**%W/W**
Acetone	> 50
Chloroform	> 30
Ethanol	< 0.1
Ethyl acetate	> 50
n-Hexane	41
Methanol	3
Dichloromethane	> 50
Toluene	> 50
Water	< 0.01

Volatility	**TGA on pure substance; heating rate 20°C/min in air**
Temperature (°C)	Weight loss (%)
250	0
275	0.2
300	1.0
325	3.7
350	9.4

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Handling & Safety

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 safety data sheet.

Note

The descriptions, designs, data and information contained herein are presented in good faith and are based on BASF's current knowledge and experience. They are provided for guidance only, and do not constitute the agreed contractual quality of the product or a part of BASF's terms and conditions of sale.

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August 2019

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