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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

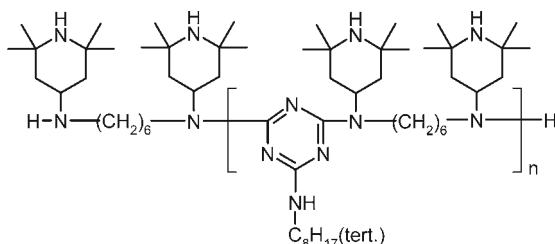
Poly[[6-[(1,1,3,3-tetramethylbutyl)amino]-1,3,5-triazine-2,4-diy]l][(2,2,6,6-tetramethyl-4-piperidiny)imino]-1,6-hexanediyl[(2,2,6,6-tetramethyl-4-piperidiny)imino]]

CAS number

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

Structure

Chimassorb 944



Molecular weight

M_n = 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	Chimassorb 944 LD
Appearance:	white to slightly yellowish granules	white to slightly yellowish low dust powder

Guidelines for use

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

* 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	Pure substance; TGA-data, heating rate 20 °C/min in air
Weight loss %	Temperature °C
0	250
0.2	275
1.0	300
3.7	325
9.4	350

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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