

® = registered trademark of BASF SE

Tinuvin® 111

Mixture of high molecular weight HALS

Characterization

Tinuvin 111 is a synergistic mixture of a methylated high molecular weight hindered amine light stabilizer (HALS) and oligomeric Tinuvin 622.

It is an excellent UV stabilizer with outstanding extraction resistance, low gasfading and low pigment interaction. Tinuvin 111 is particularly well suited for PP fibers and applications with moderate chemical exposure, as in some agricultural applications.

Chemical name

Methylated high molecular weight HALS: 1,3,5-Triazine-2,4,6-triamine,N,N"-[1,2-ethane-diyl-bis[[[4,6-bis-[butyl(1,2,2,6,6-pentamethyl-4-piperidiny)] amino]-1,3,5-triazine-2-yl]imino]-3,1-propa-nediyl]]bis[N',N"-dibutyl-N',N"-bis(1,2,2,6,6-pentamethyl-4-piperidiny)]-

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

CAS number

Preparation

Structure

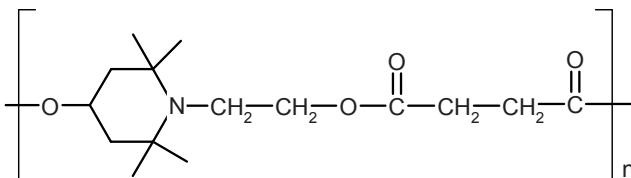
Methylated high molecular weight HALS

Molecular weight

$M_w = 2286$

Structure

Tinuvin 622



Molecular weight

$M_n = 3100 - 4000$

Applications

Tinuvin 111 areas of application include polyolefins (PP, PE), olefin copolymers such as EVA as well as blends of polypropylene with elastomers

Features/benefits

The non-interacting nature of Tinuvin 111 provides exceptional ancillary properties such as performance in agricultural, especially mulch applications.

Product forms

Code: Tinuvin 111 FDL
Appearance: white to light yellowish pastilles

Guidelines for use

Films:	UV stabilization of mulch films	0.5 – 1.5 %
Fibers:	UV stabilization of PP fibers	0.1 – 1.0 %
Thick section:	UV stabilization of PO thick sections	0.05 – 1.0 %

Physical properties

Density (20 °C): 1.05 g/cm³
Melting range: 115–150 °C
Flashpoint (ASTM D 92–78): >275 °C

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. Protect skin. Prevent contamination of the environment. Avoid dust formation and ignition sources.

For more detailed information please refer to the material 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. Because many factors may affect processing or application/use of the product, BASF recommends that the reader carry out its own investigations and tests to determine the suitability of a product for its particular purpose prior to use. It is the responsibility of the recipient of product to ensure that any proprietary rights and existing laws and legislation are observed. No warranties of any kind, either expressed or implied, including, but not limited to, warranties of merchantability or fitness for a particular purpose, are made regarding products described or designs, data or information set forth herein, or that the products, descriptions, designs, data or information may be used without infringing the intellectual property rights of others. Any descriptions, designs, data and information given in this publication may change without prior information. The descriptions, designs, data and information furnished by BASF hereunder are given gratis and BASF assumes no obligation or liability for the descriptions, designs, data or information given or results obtained, all such being given and accepted at the reader's risk.

October 2011