Technical Information

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TI/EVF 1030 e November 2010 **Plastic Additives**

The Chemical Company

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Characterization

Chemical name

CAS number

Structure

Uvinul[®] 4050

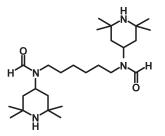
Low molecular weight hindered amine light stabilizer (HALS)

Uvinul 4050 is a low molecular weight hindered amine light stabilizer (HALS) for applications demanding particularly high light stability. It provides excellent light stability for thick sections but can also be used for articles with a high surface area such as films and tapes.

N,N'-bis(2,2,6,6-tetramethyl-4-piperidyl)-N,N'-diformylhexamethylenediamine

124172-53-8

Uvinul 4050



Molecular weight

Applications

Features/benefits

450 g/mol

Uvinul 4050 is recommended to be used in polystyrene, impact polystyrene, ABS, SAN, ASA, polypropylene, impact modified PP (TPO), EPDM, and in polyamides.

Due to its low volatility, Uvinul 4050 is unique for high temperature processes compared to other low molecular weight HALS

Uvinul 4050 provides excellent light stability for thick sections and films in the recommended substrates. A special benefit of using Uvinul 4050 is the high light-stabilizing performance, particularly for styrenic polymers and PP to protect the surface. It has broad compatibility and can be easily dispersed. Uvinul 4050 can be used in plastic articles in contact with food.

Compared to UV absorbers, the low molecular weight HALS Uvinul 4050 is not dependent on the polymer's thickness. For this reason the use of Uvinul 4050 also provides good light stability in articles with a higher specific surface, e.g. films and tapes.

Uvinul 4050 can be used alone or combined with high molecular weight HALS, such as Chimassorb[®] or Uvinul HALS to achieve a synergistic performance.

Product forms	Code: Appearance:	Uvinul 4050 white to off v	FF white granules
Guidelines for use	The recommended concentrations range between 0.1 % and 0.5 %, depend- ing on the substrate, processing conditions and application. The optimum level is substrate and application specific. Extensive performance data of Uvinul 4050 in various substrates and for various applications is available upon request.		
Physical properties	Melting range Flashpoint Specific gravity (25 Vapor pressure (20 Bulk density		155–158 °C tbd 1.08 g/cm ³ tbd Pa Tbd g/l
	Solubility (20 °C) Acetone Chloroform Ethyl acetate n-Hexane Methanol Toluene Water		% w/w 0.3 6.0 0.3 <0.01 11.0 0.3 0.5
	Volatility Weight Loss (%) 0 2 6.6		Pure substance; TGA, heating rate at 20 °C/min in air Temperature °C 225 250 275 300
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 contact with eyes. Avoid release to the environment. Avoid dust formation and ignition sources.		
Note	For more detailed information please refer to the material safety data sheet. 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 contrac- tual 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 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 furnished by BASF hereunder are given gratis and BASF assumes no obligation or liability for the 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. November 2010		