

Uvinul® 5050

Oligomeric hindered amine light stabilizer

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Characterization

Uvinul® 5050 is a high molecular weight hindered amine light stabilizer (HALS). It shows excellent polymer compatibility and good extraction resistance. One of the unique features of Uvinul® 5050 is high compatibility in polyolefins resulting in low water take-up during production of tapes. Uvinul® 5050 combines the typical benefits of a variety of high molecular weight HALS. It provides good light and thermal stability to the polymer and improved ancillary properties like low water carry-over (WCO)

Chemical name

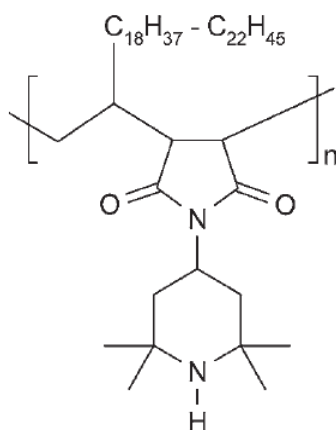
alpha-Alkenes (C₂₀ – C₂₄) maleic anhydride-4-amino-2,2,6,6-tetramethylpiperidine, polymer

CAS number

152261-33-1

Structure

Uvinul® 5050



Molecular weight

3000-4000 g/mol

Applications

Uvinul® 5050 is an effective light stabilizer for polyolefins (PP, PE), olefin copolymers such as EVA as well as blends of polypropylene with elastomers. In addition, in certain instances Uvinul® 5050 is highly effective in, flexible and rigid PVC, as well as PVC blends.

Features/benefits Uvinul® 5050 offers an optimal combination of UV- and long-term thermal stability, and ancillary properties such as minimal pigment interaction and improved water carry-over. It provides good light stability to PE and PP tapes, PP fibers, PE films, thick articles of PP and PE.

Product form

Code	Uvinul® 5050
Appearance	slightly yellow granules

Guidelines for use

Fibers:	UV and thermal stabilization of PP	0.1 – 1.4 %
Tapes:	UV and thermal stabilization of PP and HDPE	0.1 – 0.8 %
Thick sections:	UV and thermal stabilization of PP, HDPE, LDPE and LLDPE	0.05 – 1.0 %
Films:	UV and thermal stabilization of LDPE, LLDPE, EVA and EBA	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	95–125°C
Flashpoint	Not tested
Specific gravity (25 °C)	0.99 g/cm ³

Solubility (20°C) **%W/W**

Tetrahydrofurane	>40
Ethyl acetate	<0.001
Toluene	>40
Water	<0.01

Volatility **TGA on pure substance; heating rate 20°C/min in air**

Temperature (°C)	Weight loss (%)
220	0.7
230	0.8
240	1.1
270	1.7
320	3.6

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

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