Technical Information Plastic Additives



Uvinul[®] 5050

Oligomeric hindered amine light stabilizer

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® = registered trademark of BASF SE		
Characterization	Uvinul® 5050 is a high molecular weight hinde (HALS). It shows excellent polymer compatib resistance. One of the unique features of Uvinul® 9 polyolefins resulting in low water take-up during po 5050 combines the typical benefits of a variety of hi It provides good light and thermal stability to the ancillary properties like low water carry-over (WCC	ered amine light stabilizer ility and good extraction 5050 is high compatibility in roduction of tapes. Uvinul® gh molecular weight HALS. he polymer and improved))
Chemical name	alpha-Alkenes (C20 – C24) maleic tetramethylpiperidine, polymer	anhydride-4-amino-2,2,6,6-
CAS number	152261-33-1	
Structure	Uvinul® 5050	
	$ \begin{array}{c} C_{18}H_{37} - C_{22}H_{45} \\ \hline \\ 0 \\ N \\ 0 \\ \\ N \\ H \end{array} $	
Molecular weight	3000-4000 g/mol	
Applications	Uvinul® 5050 is an effective light stabilizer for p copolymers such as EVA as well as blends of poly	olyolefins (PP, PE), olefin propylene with elastomers.

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.

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.			
Code Appearance	Uvinul® 5050 slightly yellow g	ranules	
Fibers: Tapes: Thick sections: Films: The presence of is recommended the light fastness	UV and thermal UV and thermal and HDPE UV and thermal HDPE, LDPE ar UV and thermal LLDPE, EVA an f a UV absorber of for unpigmented	stabilization of PP stabilization of PP stabilization of PP, d LLDPE stabilization of LDPE, d EBA (e. g. Tinuvin® 326/328 o d or slightly pigmented ar	0.1 - 1.4 % 0.1 - 0.8 % 0.05 - 1.0 % 0.1 - 1.0 % or Chimassorb® 81) rticles or to improve
Melting range Flashpoint Specific gravity	(25 °C)	95–125°C Not tested 0.99 g/cm3	
Solubility (20°C) Tetrahydrofuran Ethyl acetate Toluene Water	;) e	% W/W >40 <0.001 >40 <0.01	
Volatility Temperature (°C 220 230 240 270 320	C)	TGA on pure substance 20°C/min in air Weight loss (%) 0.7 0.8 1.1 1.7 3.6	e; heating rate
	Uvinul® 5050 of stability, and ar improved water PP fibers, PE file Code Appearance Fibers: Tapes: Thick sections: Films: The presence of is recommended the light fastness Melting range Flashpoint Specific gravity Solubility (20°C Tetrahydrofuran Ethyl acetate Toluene Water Volatility Temperature (°C 220 230 240 270 320	Uvinul® 5050 offers an optimal stability, and ancillary properties improved water carry-over. It prov PP fibers, PE films, thick articles Code Uvinul® 5050 Appearance slightly yellow g Fibers: UV and thermal and HDPE Thick sections: UV and thermal HDPE, LDPE ar Films: UV and thermal LLDPE, EVA an The presence of a UV absorber of is recommended for unpigmented the light fastness of certain organ Melting range Flashpoint Specific gravity (25 °C) Solubility (20°C) Tetrahydrofurane Ethyl acetate Toluene Water Volatility Temperature (°C) 220 230 240 270 320	Uvinul® 5050 offers an optimal combination of UV- and stability, and ancillary properties such as minimal pigm improved water carry-over. It provides good light stability to PP fibers, PE films, thick articles of PP and PE. Code Uvinul® 5050 Appearance slightly yellow granules Fibers: UV and thermal stabilization of PP Tapes: UV and thermal stabilization of PP and HDPE and HDPE Thick sections: UV and thermal stabilization of PP, HDPE, LDPE and LLDPE Films: UV and thermal stabilization of LDPE, LLDPE, EVA and EBA The presence of a UV absorber (e. g. Tinuvin® 326/328 of is recommended for unpigmented or slightly pigmented at the light fastness of certain organic pigments. Melting range 95–125°C Flashpoint Not tested Specific gravity (25°C) 9.99 g/cm3 Solubility (20°C) %W/W Tetrahydrofurane >40 Ethyl acetate <0.001 Toluene >40 Volatility TGA on pure substanc 20°C/min in air T Temperature (°C) Weight loss (%) 220 0.7 230 0.8 240 1.1 270 1.7 </th

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