

VESTAMID® Terra HS18 natural color

Polyamide 610
Evonik Industries AG

Message:

Medium viscosity polyamide 610
VESTAMID®Terra HS18 natural color is a medium viscosity PA 610 basic polymer for monofilaments and bristles with high recovery for paint brushes and tooth brushes.
The carbonamide groups (-CO-NH-) of the polyamides form hydrogen bridge bonds between the chains of the macromolecules, thereby substantially promoting crystallinity and increasing their strength, melting point, resistance to chemicals and even water absorption. This is characteristic of all semi-crystalline polyamides. Because of its semi-crystalline morphology VESTAMID®Terra HS18 natural color provides a high impact strength, excellent chemical resistance (e.g. against greases, oils, alkalis and saline solutions), a low coefficient of friction and high abrasion resistance.
Properties of VESTAMID®Terra HS18 natural color vary little with changing humidity due to their low moisture absorption.
VESTAMID®Terra HS18 natural color is supplied as cylindrical granules, ready for processing, in moisture-proof bags.
VESTAMID® Terra is a group of new polyamides, the monomers for which are based entirely or partly on renewable raw materials.
VESTAMID® Terra HS is the polycondensation product of 1,6-hexamethylene diamine (H) and 1,10-decanedioic acid (sebacic acid—S). Because sebacic acid is extracted from castor oil, VESTAMID® Terra HS is based on natural, renewable resources up to 62%.
Global Warming Potential (GWP) 4.1 kg CO2 by Evonik, PE International.

General Information			
Features	Good Abrasion Resistance		
	High Impact Resistance		
	Low Friction		
	Low Moisture Absorption		
	Renewable Resource Content		
	Semi Crystalline		
Uses	Consumer Applications		
Appearance	Natural Color		
Forms	Granules		
Physical	Nominal Value	Unit	Test Method
Density (23°C)	1.08	g/cm³	ISO 1183
Water Absorption (Saturation, 23°C)	3.3	%	ISO 62
Viscosity Number	180	cm³/g	ISO 307
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	2100	MPa	ISO 527-2
Tensile Stress (Yield)	61.0	MPa	ISO 527-2
Tensile Strain			ISO 527-2
Yield	5.0	%	
Break	> 50	%	
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C, Complete Break	6.0	kJ/m²	
23°C, Complete Break	7.0	kJ/m²	

Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C	No Break		
23°C	No Break		
Thermal	Nominal Value	Unit	Test Method
Vicat Softening Temperature			
--	220	°C	ISO 306/A
--	196	°C	ISO 306/B
Melting Temperature ¹	222	°C	ISO 11357-3
Additional Information	Nominal Value	Unit	Test Method
Renewable Carbon Content	62	%	ASTM D6866
NOTE			
1.	2nd Heating		

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