

VESTAMID® NRG 1003 natural color

Polyamide 12

Evonik Industries AG

Message:

Low viscosity and heat stabilized PA12 compound developed for the manufacturing of thermoplastic composite tapes.

VESTAMID®NRG 1003 is characterized by excellent bonding to reinforcement fibres.

The material has an excellent compatibility against hydrocarbons (i.e. crude oil) and oilfield chemicals (i.e. paraffin inhibitors) resulting in high dimensional stability and unaffected properties of parts in contact with those.

The typical characteristics of PA 12 are low water absorption, good dimensional stability and almost unchanged properties at varying ambient humidity.

Typical temperatures for processing are 200°C-240°C.

VESTAMID®NRG 1003 is supplied as cylindrical granules, ready for processing, in moisture-proof bags.

General Information			
Additive	Heat Stabilizer		
Features	Bondability		
	Good Dimensional Stability		
	Humidity Independent		
	Low Viscosity		
Appearance	Natural Color		
Forms	Granules		
Physical	Nominal Value	Unit	Test Method
Density (23°C)	1.01	g/cm ³	ISO 1183
Viscosity Number	100	cm ³ /g	ISO 307
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	1400	MPa	ISO 527-2
Tensile Stress (Yield)	46.0	MPa	ISO 527-2
Tensile Strain			ISO 527-2
Yield	5.0	%	
Break	> 200	%	
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C, Complete Break	4.0	kJ/m ²	
23°C, Complete Break	5.0	kJ/m ²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C	No Break		
23°C	No Break		
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, Unannealed	120	°C	ISO 75-2/B
1.8 MPa, Unannealed	50.0	°C	ISO 75-2/A
Vicat Softening Temperature			

--	170	°C	ISO 306/A
--	140	°C	ISO 306/B
Melting Temperature ¹	178	°C	ISO 11357-3

NOTE

1. 2nd Heating

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