

Product Information

VESTAMID® NRG 3001 natural color

High-viscosity, heat-and light-stabilized polyamide 12 compound for extrusion

VESTAMID®NRG 3001 is a polyamide 12 compound developed for the manufacturing of hydrocarbon transport piping systems and liners.

VESTAMID®NRG 3001 is characterized by easy processing and excellent dimensional control during pipe extrusion, especially by processing of large diameter pipes.

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 process temperature should be within a range of 220°C to 240°C.

Generally, VESTAMID®NRG 3001 is processable on most of the commercially available PE extrusion machines.

VESTAMID®NRG 3001 is supplied as cylindrical granules, ready for processing, in moisture-proof bags.

For further information about processing, of VESTAMID®NRG 3001, please follow the general recommendations in our brochure "VESTAMID®Processing Guide Line".

For further information, please contact us at evonik-hp@evonik.com.

Property	Test method		Unit	VESTAMID® NRG 3001 natural color	
	international	national			
Density	23°C	ISO 1183	DIN EN ISO 1183	g/cm³	1.02
Melting range		ISO 11357			
DSC	2 nd heating			°C	176
Tensile test	ISO 527-1	DIN EN ISO 527-1			
Stress at yield	ISO 527-2	DIN EN ISO 527-2	MPa	38	
Strain at yield			%	7	
Strain at break			%	> 200	
Tensile modulus	ISO 527-1	DIN EN ISO 527-1	MPa	1320	
	ISO 527-2	DIN EN ISO 527-2			
Tensile modulus	ISO 527-1	DIN EN ISO 527-1			
after saturation in crude oil	ISO 527-2	DIN EN ISO 527-2			
	23°C		MPa	770	
	40°C		MPa	441	
	60°C		MPa	336	
	80°C		MPa	293	
	100°C		MPa	259	
Poisson ratio	ISO 527-1	DIN EN ISO 527-1	MPa		
	23°C	ISO 527-2	DIN EN ISO 527-2		0.43
	100°C				0.45
CHARPY impact strength	ISO 179/1eU	DIN EN ISO 179/1eU			
	23°C		kJ/m²	54	
	-30°C		kJ/m²	15	
CHARPY notched impact strength	ISO 179/1eA	DIN EN ISO 179/1eA			
	23°C		kJ/m²	54	
	-30°C		kJ/m²	15	
Thermal Expansion Coefficient	23°C	ISO 11359	DIN 53752	10 ⁻⁴ K ⁻¹	1.4
Thermal Conductivity Coefficient		ASTM C177	ASTM C177	W/(m.K)	0.24
Length swelling	80°C	ASTM D471			
			%	1.2	
IRM 903			%	1.2	
Diesel oil			%	1.2	
Crude oil			%	1.2	

¹⁾ N = No break

® = registered trademark

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