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 international	national	Unit	VESTAMID® NRG 3001 natural color
Density	23°C	ISO 1183	DIN EN ISO 1183	g/cm³	1.02
Melting range		ISO 11357			
DSC	2nd 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 ISO 527-2	DIN EN ISO 527-1 DIN EN ISO 527-2	MPa	1320
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	N[1)]
	-30°C			kJ/m²	N[1)]
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			
IRM 903				%	1.2
Diesel oil				%	1.2
Crude oil				%	1.2

[1)] N = No break

® = registered trademark

Evonik Industries AG High Performance Polymers 45764 Marl Germany
Phone +49 2365 49-9227 E-mail evonik-hp@evonik.com
www.vestamid.com

EVONIK INDUSTRIES