

VESTAMID® NRG 3001 natural color

Polyamide 12
Evonik Industries AG

Message:

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.

General Information			
Additive	Heat Stabilizer		
	Impact Modifier		
Features	Good Chemical Resistance		
	Good Dimensional Stability		
	Good Processability		
	High Viscosity		
Appearance	Natural Color		
Forms	Granules		
Processing Method	Extrusion		
Physical	Nominal Value	Unit	Test Method
Density (23°C)	1.02	g/cm ³	ISO 1183
Swelling			ASTM D471
Crude oil : 80°C	1.2	%	
Diesel oil : 80°C	1.2	%	
IRM 903 : 80°C	1.2	%	
Poisson's Ratio			
23°C	0.43	MPa	ISO 527-1
100°C	0.45	MPa	ISO 527-2
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			ISO 527-2
--	1320	MPa	
23°C ¹	770	MPa	
40°C ²	441	MPa	
60°C ³	336	MPa	
80°C ⁴	293	MPa	
100°C ⁵	259	MPa	

Tensile Stress (Yield)	38.0	MPa	ISO 527-2
Tensile Strain			ISO 527-2
Yield	7.0	%	
Break	> 200	%	
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C, Complete Break	15	kJ/m ²	
23°C, Complete Break	54	kJ/m ²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C	No Break		
23°C	No Break		
Thermal	Nominal Value	Unit	Test Method
Melting Temperature ⁶	176	°C	ISO 11357-3
CLTE - Flow (23°C)	1.4E-4	cm/cm/°C	ISO 11359-2
Thermal Conductivity	0.24	W/m/K	ASTM C177
Extrusion	Nominal Value	Unit	
Melt Temperature	220 to 240	°C	
NOTE			
1.	after saturation in crude oil		
2.	after saturation in crude oil		
3.	after saturation in crude oil		
4.	after saturation in crude oil		
5.	after saturation in crude oil		
6.	2nd Heating		

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Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

