VESTAMID® NRG 4101 yellow

Polyamide 12

Evonik Industries AG

Message:

For Steel Pipe Protection (Encasement)
VESTAMID® NRG 4101 offers a flexible, mechanically tough encasement system that combines the advantages of polyethylene coating and cement mortar casing.
Uses of VESTAMID® NRG Products:
The important advantages of VESTAMID® NRG 4101 as an encasement material are:
unusually high impact resistance and toughness, even at low temperatures
excellent stress cracking resistance
excellent wear resistance
low sliding friction coefficient
Product characteristics compared with other encasement materials:
VESTAMID® NRG 4101 yellow has higher Shore hardness than polyethylene or polypropylene. In contrast to polyethylene or propylene encasement, therefore, the polyamide encasement offers, apart from the corrosion protection provided by the barrier effect, also mechanical protection for the encased steel pipe.
Application areas for the new encasement material are found in non-conventional installation technologies such as:
horizontal directional drilling
the soil displacement method with non-steered displacement hammers
dynamic ramming
plow technology
We recommend a processing temperature between 230°C (446°F) and 260°C (500°F) - in some cases up to 280°C (536°F) - during the extrusion process. Drying at 80°C (176°F) for 2 hours to 4 hours before processing is recommended.

General Information			
Features	Durable Good Toughness High Molecular Weight Hydrocarbon Resistant		
Appearance	Yellow		
Processing Method	Extrusion		
Physical	**Nominal Value**	**Unit**	**Test Method**
Density (23°C)	1.02	g/cm³	ISO 1183
Hardness	**Nominal Value**	**Unit**	**Test Method**
Shore Hardness (Shore D)	73		ISO 868
Ball Indentation Hardness [1]	76.0	MPa	ISO 2039-1
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	1350	MPa	ISO 527-2
Tensile Stress (Yield)	40.0	MPa	ISO 527-2
Tensile Strain			ISO 527-2
Yield	12	%	
Break	> 150	%	
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Unnotched Impact Strength (-40°C)	No Break		ISO 179/1eU

Thermal	Nominal Value	Unit	Test Method
Vicat Softening Temperature	170	°C	ISO 306/A
Melting Temperature [2]	177	°C	ISO 11357-3
Extrusion	**Nominal Value**	**Unit**	
Drying Temperature	80.0	°C	
Drying Time	2.0 to 4.0	hr	
Melt Temperature	230 to 280	°C	
NOTE			
1.	H30		
2.	2nd Heating		

Recommended distributors for this material

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