

Venslide 7N (Natural UHMWPE)

Technical Data Sheet

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Gantiel Vensott
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Product Description

Venslide 7N, natural UHMWPE of a very high quality base resin, is renowned for its unique properties of excellent impact strength and abrasion resistance. Moisture, stain and odor resistance, coupled with food grade compliance make this product extremely valuable and useful in conveyor and food machinery applications.

Applications

Venslide 7N Rod is ideally suited for the manufacture of bushings, bearings, rollers and conveyor parts, such as transfer rollers and sprockets. When in sheet form, it is best suited for wear applications especially in contact with metals or other plastics. It is commonly used in industrial applications such as chute linings, fender bumpers, paper and other machine parts and conveyor wear strips.

Other Material Properties

This grade of polyethylene exhibits good combination of stiffness, toughness, mechanical damping ability with wear and abrasion resistance and can easily be filler welded for lining applications. It is a versatile grade used mainly in the food industry (meat and fish processing) but it is also put to use in all kinds of mechanical, chemical, electrical and pharmaceutical applications.

Key Features and Benefits

- High Abrasion Resistance
- Low Coefficient of Friction
- Lightweight
- Less Expensive than Stainless Steel
- Adaptable to a wide variety of applications
- Formable
- High Impact Resistance
- Chemical Resistant
- Great Release and Abrasion Properties
- Excellent Retrofit for Protective Linings
- Can be cut, shaped, drilled, turned and tapped "on site" with ordinary woodworking tools.

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[Pick the date]

Technical Properties

	Value	Unit	DIN	ISO/EC
Molecular Weight	5x10 ⁶	g/mol		
Code	1.2			15527:2013
Density	≤0.94	Kg/dm ³	53479	1183
Water Absorption – saturation at 23°C	<0,01	%	53715	

Mechanical Properties

	Value	Unit	DIN	ISO/EC
Yield/Break stress	~20	MPa	53455	527
Breaking elongation	>300	%	53455	527
Zug-E-Modul	>700	MPa	53457	
Notch impact Strength – Charpy	≥170	kJ/m ²	53453	179
Shore hardness D	61-65	°	868	7619-1
Ball hardness	>30	N/mm ²	53456	2039
Sand Slurry Test	100	%		15527
Coefficient of sliding friction Steel (0.25m/s, 0.25N/mm ²)	~0.2			
Coefficient of sliding friction POM (0.25m/s, 0.25N/mm ²)				

Electric Properties

	Value	Unit		Verification
Electrical strength	≤45	KV/mm	53481	60243
Specific constant resistance	>10 ¹²	Ω x cm	53482	60093
Surface resistance	>10 ¹²	Ω	53482	60093

Thermal Properties

	Value	Unit	DIN	ISO/EC
Melting point	130-135	°C		3146 method C
Heat conductivity 23°C	0.4	W (K x m)	52612	
Linear thermal coefficient of expansion α (average value between 23 and 60 °C)	20x10 ⁻⁵	m/(K x m)	53752	11359-2
Upper service Temperature in air short term	90	°C		
Upper service Temperature in air constant (5000h)	80	°C	53446	
Lower service Temperature	-200	°C		
Burning behavior per UL94 – sample thickness 3/6mm	HB			

Physiological properties

	Value	Unit	DIN	ISO/EC
Approved for use in food industry (FDA)	Yes			
Approved for use in food industry (EU)	No			

The values shown in the table, enable to compare materials faster. These values are short-term values, which can be influenced by processing, environmental as well as application conditions. Therefore, these values do not represent assured properties. It is due to the customer's responsibility whether the chosen material is suitable for its specific application.