

Venslide 2000E Antispark (Black Electroconductive UHMWPE) Technical Data Sheet



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Product Description

Venslide Antispark, black UHMWPE of a very high quality base resin, is renowned for its unique properties of excellent impact strength and abrasion resistance. Inorganic fillers make this product widely used externally with superior UV resistance. Venslide Antispark is designed to avoid the formation of electrostatic charging. According to the evaluation of the electrostatic charging as per IEC 60079-0 and EN 13463-1 resp. the material can be safely used for all explosion groups (I, IIA, IIB, and IIC) for its intended application in explosive areas in all zones, provided that a secure grounding of all goods out of this material is made. Consequently, the material can also be used for devices and machineries which have to correspond to the requirements of the EU Directive 94/9/EC (also named ATEX 95). Its implementing is prohibited until it is proven that the machine the component out of our material is to be used in complies with the EC machine directive (original version 89/393/EEC including all further amendments).

Applications

- Electrical Engineering
- Highly Wear Resistant Slide Bars
- Highly Wear Resistant Belt Guides
- Highly Wear Resistant Wear Strips
- Lining and Bulk Material Handling
- Transportation
- Highly Wear Resistant Chain Guides
- Highly Wear Resistant Sprockets
- Highly Wear Resistant Slide Bearings
- Sliding Guides

Other Material Properties

This grade of polyethylene exhibits good combination of stiffness, toughness, mechanical damping ability with wear and abrasion resistance. It is premium grade UHMWPE, designed for specialty use where formation of static charge must be avoided.

Key Features and Benefits

- High Abrasion Resistance
- Low Coefficient of Friction
- Lightweight
- Excellent Retrofit for Protective Linings
- Designed to Avoid Electrostatic Charging
- High Impact Resistance
- Chemical Resistant
- Great Release, Non Stick Properties
- Can be cut, shaped, drilled, turned and tapped "on site" with ordinary woodworking tools.

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Technical Data Sheet

Technical Properties

	Value	Unit	DIN	ISO/EC
Molecular Weight Code	9x10 ⁶	g/mol		
Density	1.1			15527:2013
Water Absorption – saturation at 23°C	≤0.94	Kg/dm ³	53479	1183
	<0,01	%	53715	

Mechanical Properties

	Value	Unit	DIN	ISO/EC
Yield/Break stress	~20	MPa	53455	527
Breaking elongation	>220	%	53455	527
Zug-E-Modul	>700	MPa	53457	
Notch impact Strength – Charpy	≥120	kJ/m ²	53453	179
Shore hardness D	60-63	°	868	7619-1
Ball hardness	>25	N/mm ²	53456	2039
Sand Slurry Test	80	%		15527
Coefficient of sliding friction Steel (0.25m/s, 0.25N/mm ²)	~0.1	μ		
Coefficient of sliding friction POM (0.25m/s, 0.25N/mm ²)	~0.18	μ		

Electric Properties

	Value	Unit		Verification
Electrical strength		KV/mm	53481	60243
Specific constant resistance	≤10 ⁶	Ω x cm	53482	60093
Surface resistance	≤10 ⁶	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)	Yes			

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.