

### Technical Data Sheet



## Robalon<sup>®</sup> BIO

PE-UHMW / PE 1000

#### Typical characteristics

- UV-resistant
- Chemical resistant

#### Typical industries

- Drinking & Waste Water Technology
- Mechanical Engineering Industry
- Agriculture Industry
- Alpine Industry

#### Sustainability

- Bio-based raw materials reduce the use of fossil raw materials

	Test method	Unit	Guideline value
<b>General properties</b>			
Density	DIN EN ISO 1183-1	g / cm <sup>3</sup>	0,93
Water absorption	DIN EN ISO 62	%	<0,01
Flammability (Thickness 3 mm / 6 mm)	UL 94		HB/HB
Molecular weight		g/mol	9,20 * 10 <sup>6</sup>
Color			black
<b>Mechanical properties</b>			
Yield stress	DIN EN ISO 527	MPa	18
Elongation at break	DIN EN ISO 527	%	>200
Tensile modulus of elasticity	DIN EN ISO 527	MPa	550
Notched impact strength	DIN EN ISO 179/1eA	kJ / m <sup>2</sup>	>90
Shore hardness	DIN EN ISO 868 / 15 sec	scale D	63
Compression - compression set	23°C, 2N/mm <sup>2</sup> , 1h	%	~2
Compression - compression set	80°C, 10N/mm <sup>2</sup> , 56h	%	~20
<b>Thermal properties</b>			
Melting temperature	DIN EN ISO 3146	°C	135
Thermal conductivity	DIN EN ISO 8302	W / (m * K)	0,41
Thermal capacity	DIN 51005	kJ / (kg * K)	1,84
Coefficient of linear thermal expansion	DIN 53752	10 <sup>-6</sup> / K	200
Service temperature, long term	Average	°C	-200 ... 80

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	Test method	Unit	Guideline value
Service temperature, short term (max.)	Average	°C	110
<b>Electrical properties</b>			
Volume resistivity	DIN EN 62631-3-1	$\Omega \cdot \text{cm}$	$10^{10}$
Surface resistivity	DIN EN 62631-3-2	$\Omega$	$10^{10}$
Comparative tracking index	IEC 60112		600

The data given are standard values which are based on our experience & previous technical studies. These values are influenced by the design, processing conditions and environmental influences out of our control. The sustainability of the material for a given application is the responsibility of the user. Typing and printing errors reserved.

