

## Technical Data Sheet

# Robalon® FG

PE-UHMW / PE 1000

### Typical characteristics

- Physiologically safe
- Good sliding properties
- Good wear properties
- Food compliant according to 10/2011/EU, 1935/2004/EC, FDA

### Typical industries

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

	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			white
<b>Mechanical properties</b>			
Yield stress	DIN EN ISO 527	MPa	17
Elongation at break	DIN EN ISO 527	%	>300
Tensile modulus of elasticity	DIN EN ISO 527	MPa	470
Notched impact strength	DIN EN ISO 179/1eA	kJ / m <sup>2</sup>	>100
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

[ri-inquiry@roechling.com](mailto:ri-inquiry@roechling.com) • [www.roechling.com/industrial/materials](http://www.roechling.com/industrial/materials)



	Test method	Unit	Guideline value
Service temperature, short term (max.)	Average	°C	110
<b>Electrical properties</b>			
Dielectric constant	IEC 60250		2,1 ... 3
Dielectric dissipation factor (10 <sup>6</sup> Hz)	IEC 60250		10 * 10 <sup>-4</sup>
Dielectric dissipation factor (100 Hz)	IEC 60250		3,9 * 10 <sup>-4</sup>
Volume resistivity	DIN EN 62631-3-1	Ω * cm	10 <sup>12</sup>
Surface resistivity	DIN EN 62631-3-2	Ω	10 <sup>12</sup>
Comparative tracking index	IEC 60112		600
Dielectric strength	IEC 60243	kV / mm	45

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.



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