Technical Data Sheet

Robalon® W

PE-UHMW / PE 1000

Typical characteristics

- Good sliding properties
- Good wear properties
- High elongation at break
- Good impact strength

Typical industries

- Construction de machines et d'installations
- Technique agricole
- Industrie alpine
- Industrie de l'équipement électrique

	Test method	Unit	Guideline value
General properties			
Densité	DIN EN ISO 1183-1	g / cm^3	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 * 10^6
Couleur			white
Mechanical properties			
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^2	>100
Shore hardness	DIN EN ISO 868 / 15 sec	scale D	63
Compression - compression set	23°C, 2N/mm^2, 1h	%	~2
Compression - compression set	80°C, 10N/mm^2, 56h	%	~20
Thermal properties			
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^{-6} / K	200
Service temperature, long term	Average	°C	-200 ... 80

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Print: 30/04/2026 • Release: 27/01/2026 • Version: 1.0
PIM-ID: 709746 • PIM-Code: 85-12-223.126.11.162-5.6.8.11-4
Company-IDs: 21510

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