

Product information

Wefapress Wefamedic 1050

Wefamedic 1050 is an ultrahigh molecular weight low pressure polyethylene produced by RAM extrusion and sinter press technology. Due to its extremely low calcium stearate content of less than 5 ppm it is especially suitable for medical applications. Due to its slightly higher molecular density, Wefamedic 1050 has a slightly lower solidity than Wefamedic 1020. The characteristics of Wefamedic 1050 are as follows:

- good mechanical and physical properties
- high toughness
- outstanding tribological characteristics



Standard colours:	natural
Special colours:	--
Form of delivery:	sheets, rods (catalogue medical technology)
Finished parts:	on request
Fields of application:	<ul style="list-style-type: none">• endoprosthesis surgery

Technical Data Sheet

Material designation	Wefamedic 1050		
Raw material	UHMW-PE		
Material colour(s)			
Properties	Unit	Test method	Value
Molecular weight (average molar mass)	g/mol		9.2 * 10 ⁶
Mechanical properties			
Density	kg/m ³	ISO 1183	930
Elongational stress	MPa	DIN 53493	0.51+/-0.09
Yield stress	MPa	DIN ISO / R 527	≥ 19
Elongation at yield	%	DIN ISO / R 527	≥ 8
Elongation at break	%	DIN ISO / R 527	> 50
Tensile modulus	MPa	ISO 527	680
Notched impact strength	kJ/m ²	ISO 11542	≥ 90
Abrasion		Sand slurry method	80
Thermal properties			
Dimensional stability under heat	°C	DIN 53461	42
Vicat softening temperature	°C	DIN ISO 306	80
Crystallite melting range	°C	DTA	130 - 135
Thermal conductivity at 23°C	W/m * K	DIN 52612	0.41
Specific heat at 23°C	kJ/kg * K		1.84
Coefficient of linear expansion at 23 °C	l/K	DIN 53752	approx. 2 * 10 ⁻⁴
Electrical properties			
Volume resistivity	Ω cm	IEC 60093	> 10 ¹⁴
Surface resistance	Ω	IEC 60093	> 10 ¹²
Dielectric strength	kV/mm	IEC 60243	45
Relative permittivity	at 100 Hz	IEC 60250	2.1
Dissipation factor	at 100 Hz	IEC 60250, part 1	3.9 * 10 ⁻⁴
Tracking		IEC 112, VDE 0303, part 1	600
Arc resistance		DIN VDE 0303, part 5	L4

Notes for the user:

Data sheet specifications are made to our today's knowledge. This information does not mean that certain properties are agreed upon or assured. Whether or not a material is suitable for a given application is the user's decision. All specifications are subject to change.

Vreden, August 03