

## Product information

### Wefapress Wefamedic 1020

Wefamedic 1020 is an ultrahigh molecular weight low pressure polyethylene which is 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 lower molecular density, Wefamedic 1020 has a slightly higher solidity than Wefamedic 1050. The characteristics of Wefamedic 1020 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"><li>• endoprosthetic surgery</li></ul>

## Technical Data Sheet

Material designation	<b>Wefamedic 1020</b>		
Raw material	UHMW-PE		
Material colour(s)			
<b>Properties</b>	Unit	Test method	Value
Molecular weight (average molar mass)	g/mol		$5 \cdot 10^6$
<b>Mechanical properties</b>			
Density	kg/m <sup>3</sup>	ISO 1183	930
Elongational stress	MPa	DIN 53493	0.25+/-0.05
Yield stress	MPa	DIN ISO / R 527	≥ 21
Elongation at yield	%	DIN ISO / R 527	≥ 8
Elongation at break	%	DIN ISO / R 527	> 50
Tensile modulus	MPa	ISO 527	720
Notched impact strength	kJ/m <sup>2</sup>	ISO 11542	≥ 180
Abrasion		San slurry method	100
<b>Thermal properties</b>			
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. $2 \cdot 10^{-4}$
<b>Electrical properties</b>			
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	$3.9 \cdot 10^{-4}$
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