

## CENTROMID 12 / PA 12

### Physical Properties

	Value	Unit	Verification
Density	1.04	g/cm <sup>3</sup>	ISO 1183
Moisture pick-up till saturation (in normal climate 23 °C / 50% r.h.)	0.70	%	ISO 62
Water absorption till saturation (in water at 23 °C)	1.50	%	ISO 62

### Mechanical Properties

	Value	Unit	Verification
Tensile stress at yield [ $v = 50$ mm/min]	40	MPa	ISO 527-2
Tensile stress at break [ $v = 5$ mm/min]	-	MPa	ISO 527-2
Nominal percentage elongation at break	>50	%	ISO 527-2
Tensile modulus of elasticity	1300	MPa	ISO 527-2
Flexural modulus of elasticity	-	MPa	ISO 178
Ball indentation hardness (value at 30 sec.)	-	MPa	ISO 2039-1
Rockwell hardness (measured with test pieces 10 mm thick)	M 80		ISO 2039-2
Charpy impact strength (+23 °C)	n.br.	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy impact strength - notched (+23 °C)	10	kJ/m <sup>2</sup>	ISO 179/1eA

### Electric Properties

	Value	Unit	Verification
Specific insulation resistance [ $\geq$ ]	$10^{11}$	Ohm · m	IEC 60093
Specific surface resistance [ $\geq$ ]	$10^{12}$	Ohm	IEC 60093
Dielectric constant (at 1 MHz)	3.6	$10^6$ Hz	IEC 60250
Dielectric constant (at 100 Hz)	-	$10^2$ Hz	IEC 60250
Dissipation factor (at 1 MHz)	0.026	$10^6$ Hz	IEC 60250
Dissipation factor (at 100 Hz)	-	$10^2$ Hz	IEC 60250
Dielectric strength K20/K20 (in transformer oil)	32	kV/mm	IEC 60243-1
Comparative tracking index (CTI)	600		IEC 60112

### Thermal Properties

	Value	Unit	Verification
Temperature for usage in air (max. short term)	150	°C	
Temperature for usage in air (max. lasting)	95	°C	
Minimum service temperature in air	-	°C	
Heat distortion temperature (HDT A process)	50	°C	ISO 75-2
Coefficient of linear expansion (at length, 23 – 60 °C)	1.2	$10^{-4}/K$	ISO 11359
Thermal conductivity (+23 °C)	0.23	W/(K · m)	DIN 52612
Flammability according UL Standard (thickness 3 and 6 mm)	-	Class	UL 94
Vicat softening temperature (VST/B/50)	-	°C	ISO 306
Melting point (DSC, 10 K/min)	178	°C	ISO 3146

n.br. = no break

The noted data correspond to our latest state of knowledge. The suitability of the products for special applications cannot be guaranteed legally binding, due to the a.m. properties.

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