Technical data sheet

CENTROMID 6 E / PA 6 E

Physical Properties	Value	Unit	Verification
Density	1.14	g/cm³	ISO 1183
Moisture pick-up till saturation (in normal climate 23 ℃ / 50% r.h.)	2.50	%	ISO 62
Water absorption till saturation (in water at 23 ℃)	9	%	ISO 62

Mechanical Properties	Value	Unit	Verification
Tensile stress at yield [v = 50 mm/min]	76	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	3250	MPa	ISO 527-2
Flexural modulus of elasticity	-	MPa	ISO 178
Ball indentation hardness (value at 30 sec.)	150	MPa	ISO 2039-1
Rockwell hardness (measured with test pieces 10 mm thick)	M 85		ISO 2039-2
Charpy impact strength (+23 ℃)	n.br.	kJ/m²	ISO 179/1eU
Charpy impact strength - notched (+23 ℃)	5,5	kJ/m²	ISO 179/1eA

Electric Properties	Value	Unit	Verification
Specific insulation resistance [≥]	10^{12}	Ohm · m	IEC 60093
Specific surface resistance [≥]	10^{13}	Ohm	IEC 60093
Dielectric constant (at 1 MHz)	3.3	10^{6} Hz	IEC 60250
Dielectric constant (at 100 Hz)	3.9	10^{2} Hz	IEC 60250
Dissipation factor (at 1 MHz)	0.021	10^{6} Hz	IEC 60250
Dissipation factor (at 100 Hz)	0.019	10^{2} Hz	IEC 60250
Dielectric strength K20/K20 (in transformer oil)	25	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)	160	℃	
Temperature for usage in air (max. lasting)	85	℃	
Minimum service temperature in air	-40	℃	
Heat distortion temperature (HDT A process)	70	℃	ISO 75-2
Coefficient of linear expansion (at length, 23 – 60 ℃)	0.9	$10^{-4/K}$	ISO 11359
Thermal conductivity (+23 ℃)	0.28	W/(K · m)	DIN 52612
Flammability according UL Standard (thickness 3 and 6 mm)	HB	Class	UL 94
Vicat softening temperature (VST/B/50)	-	℃	ISO 306
Melting point (DSC, 10 K/min)	220	℃	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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