TECHNICAL DATA SHEET

MC Nylon

Cast nylon (monomer cast)

Property	Standard	Unit	Value
MECHANICAL PROPERTIES			
Density	ASTM D792	g/cm^3	1.15
Yield stress / stress at break (tensile)	ISO 527	MPa	±85
Elongation at break	ISO 527	%	25
Tensile modulus of elasticity	ISO 527	MPa	3500
Compressive stress at 1% / 2% nominal strain	ISO 604	MPa	26 / 51
Hardness	ISO 2039-1	Rockwell	M88
Pendulum impact test	ISO 179/1eU	—	3.5
THERMAL PROPERTIES			
Melting point	DSC	°C	220
Working temperature	ASTM D648	°C	105
Continuous service temperature	—	°C	170
Short-term service temperature	—	°C	220
Thermal conductivity	DIN 52612-1	W/(m·K)	0.23
Linear thermal expansion coefficient (23–100 °C, mean)	—	m/(m·K)	80×10^{-6}
Linear thermal expansion coefficient (23–150 °C, mean)	—	m/(m·K)	90×10^{-6}
ELECTRICAL PROPERTIES			
Dielectric strength	IEC 60243	kV/mm	25
Dielectric dissipation factor	ASTM D150	—	0.032
Volume resistivity	IEC 60093	Ω·cm	10^{13}
Surface resistivity	IEC 60093	Ω	10^{14}
Relative permittivity (100 Hz / 1 MHz)	IEC 60250	—	3.6 / 3.2
CHEMICAL PROPERTIES			
Water absorption (immersion at 23 °C, 24 h)	—	%	0.65
Water absorption (saturation at 23 °C)	—	%	6.5
Resistance to alkalis	—	—	+
Resistance to acidic and alkaline solutions	—	—	+
Resistance to chlorinated alkalis	—	—	0
Resistance to aromatic compounds	—	—	+
Resistance to ketones	23 °C · 60% RH	—	+
Resistance to water	23 °C · 60% RH	—	+
OTHER PROPERTIES			
Flammability	UL 94	—	HB
Bondability	—	—	+
Non-toxic and harmless	EEC 90/128 · FDA	—	+
Coefficient of friction	DIN 53375	—	0.36
UV resistance	—	—	–

Chemical resistance key: + resistant · 0 depends on application · – not resistant

Typical reference values provided by the manufacturer, obtained on standard test specimens. Values may vary with batch, thickness, processing and service conditions and must not be used as specifications. Validation in the final application is recommended.