

TECHNICAL PROPERTIES OF PA 6 + MoS₂

03/2010

Property	Unit	Test method	Condition of specimen	PA 6 + MoS ₂
MECHANICAL PROPERTIES				
Tensile strength at break	MPa	ISO 527	dry	75
	MPa	ISO 527	moist	
Elongation at break	%	ISO 527	dry	25
	%	ISO 527	moist	
Modulus of elasticity in tension	MPa	ISO 527	dry	2700
	MPa	ISO 527	moist	
Charpy impact strength + 23°C	kJ/m ²	ISO 179/1eU	dry	no break
- 40°C	kJ/m ²		dry	
Charpy notched impact strength	kJ/m ²	ISO 179/1eA	dry	
	kJ/m ²		moist	
Hardness shore scale D		ISO 868	dry	80
Time yield limit $\sigma_{1/1000}$ 23°C/50% RH	MPa	ISO 899	moist	
100°	MPa	ISO 899	dry	
Apparent modulus E _{C/1000 20} 23°C/50% RH	MPa	ISO 899	moist	
THERMAL PROPERTIES				
Heat distortion temperature, Method A	°C	ISO 75	dry	
Method B	°C	ISO 75	dry	
Melting point Method A	°C	ISO 3146	-	220
Maximum service temperature for few hours operation	°C	-	-	
TEP 5 000 hours (50% of tensile strength) ¹⁾	°C	IEC 216	-	
TEP 20 000 hours (50% of tensile strength) ¹⁾	°C	IEC 216	-	
Thermal coefficient of linear expansion	1/K.10 ⁻⁵	DIN 53452	dry	
Thermal conductivity Method A	W/(K.m)		dry	
Specific heat capacity	J/(g.K)	IEC 1006	dry	
DIELECTRIC PROPERTIES				
Dielectric constant 1 MHz	-	IEC 250	dry	
	-	IEC 250	moist	
Dissipation factor tan δ 1 MHz	-	IEC 250	dry	
	-	IEC 250	moist	
Dielectric strength	KV/mm	IEC 243	dry	
	KV/mm	IEC 243	moist	
Volume resistivity	Ω .cm	IEC 93	dry	> 10 ¹²
	Ω .cm	IEC 93	moist	
Surface resistivity R _{0A}	Ω	IEC 93	dry	> 10 ¹²
	Ω	IEC 93	moist	
Resistance to tracking KA/ KB method	-	IEC 112	dry/moist	
KC method	-	IEC 112	dry/moist	
MISCELLANEOUS PROPERTIES				
Mass density	g/cm ³	ISO 1183	dry	1,15
Moisture absorption at 23°C, 50% RH	%	ISO 1110	-	3
Water absorption at 23 °C	%	ISO 62	-	8
Fire performance				
Flameability Acc. VDE		VDE 0304	dry	
Flameability of interior materials in passenger cars h>1mm	mm/min	FMVSS 302	moist	
Flameability according UL Standard (thickness of specimen 1,6 mm)	-	UL 94	-	HB
Resistance to wear ²⁾	μ m/km	ISO 7148-2	dry	

1. Datas of resin only
2. Made by a pin / rotating disc test according DIN-ISO 7148-2 under following conditions: R_a = 0,35 – 0,45 μ m (steel disc), v = 0,3 m/s, p = 3 N/mm², time T>16h

All statements, technical information and recommendations contained in this brochure are presented in good faith, but all information given is without warranty and liability.