

TECHNICAL PROPERTIES OF ZELLAMID[®] 900 (POM-C,white/black)

03/2010

Property	Unit	Test method ISO/IEC*	Condition of specimen	ZELLAMID [®] 900 POM-C 900 SW POM-C black	
MECHANICAL PROPERTIES					
Tensile strength at break	MPa	ISO 527	dry	70	
	MPa	ISO 527	moist		
Elongation at break	%	ISO 527	dry	40	
	%	ISO 527	moist		
Modulus of elasticity in tension	MPa	ISO 527	dry	3000	
	MPa	ISO 527	moist		
Charpy impact strength	+ 23°C	ISO 179/1eU	dry	no break	
	- 40°C		dry	80	
Charpy notched impact strength	+ 23°C	ISO 179/1eA	dry		
	- 40°C		moist		
Hardness shore scale D		ISO 868	dry	81	
Time yield limit $\sigma_{1/1000}$	23°C/50% RH	MPa	ISO 899	moist	14
	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	110
	Method B	°C	ISO 75	dry	160
Melting point	Method A	°C	ISO 3146	-	164-168
Maximum service temperature for few hours operation		°C	-	-	-
TFP 5.000 hours (50% of tensile strength) ¹⁾		°C	IEC 216	-	-
TEP 20.000 hours (50% of tensile strength) ¹⁾		°C	IEC 216	-	100
Thermal coefficient of linear expansion		1/K.10 ⁻⁵	DIN 53452	dry	11
Thermal conductivity	Method A	W/(K.m)		dry	
Specific heat capacity		J/(g.K)	IEC 1006	dry	1,5
DIELECTRIC PROPERTIES					
Dielectric constant	1 MHz	-	IEC 250	dry	3,8
		-	IEC 250	moist	
Dissipation factor tan δ	1 MHz	-	IEC 250	dry	0,024
		-	IEC 250	moist	
Dielectric strength		KV/mm	IEC 243	dry	> 20
		KV/mm	IEC 243	moist	
Volume resistivity		Ω .cm	IEC 93	dry	10 ¹⁵
		Ω .cm	IEC 93	moist	
Surface resistivity		Ω	IEC 93	dry	
		Ω	IEC 93	moist	
Resistance to tracking	KA/ KB method	-	IEC 112	dry/moist	KB > 600
	KC method	-	IEC 112	dry/moist	
MISCELLANEOUS PROPERTIES					
Mass density	Method D, E	g/cm ³	ISO 1183	dry	1,41-1,43
Moisture absorption at 23°C, 50% RH	Saturation	%	ISO 1110	-	0,2
Water absorption at 23 °C	Saturation	%	ISO 62	-	0,25
Fire performance	Flameability Acc. VDE		VDE 0304	dry	BH 3-25mm/min
	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: $R_a = 0,35 - 0,45 \mu$ 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. The reader is cautioned, however that Zell-Metall cannot guarantee the accuracy or completeness of this information, and it is the customer's responsibility to determine the suitability of Zell-Metall products in any given application