

## Datasheet AS ZL 600PEM

(1): Data of the resin only.  
 (2): Made by a pin/rotating disc test according DIN ISO 7148-2 under following conditions: Ra = 0.35 – 0.45 µm (steel disc), v = 0.3 m/s, p = 3 N/mm<sup>2</sup> and time T>16h.

Dry: Dried at 80 °C and 1 mbar until weight is constant (moisture content less than 0.2%).  
 Moist: After storage in a standard atmosphere of 23 °C and 50% relative humidity (DIN 50014) until saturation.

Availability\*: In stock.  
 Availability \*\*: Not in stock.

Material	
Material	Nylon 6
Color	

Availability*	Unit	Value
Rod diameter	mm	
Tube O.D.	mm	
Sheet thickness	mm	

Physical Properties	Test Standard	Unit	Condition of Specimen	Value
Mass density (method D and E)	ISO 1183	g/cm <sup>3</sup>	Dry	
Moisture absorption at 23 °C and 50% RH (saturation)	ISO 62	%		
Water absorption at 23 °C (saturation)	ISO 62	%		

Mechanical Properties	Test Standard	Unit	Condition of Specimen	Value
Tensile strength at break	ISO 527	MPa	Dry	
Tensile strength at break	ISO 527	MPa	Moist	
Elongation at break	ISO 527	%	Dry	
Elongation at break	ISO 527	%	Moist	
Modulus of elasticity in tension	ISO 527	MPa	Dry	
Modulus of elasticity in tension	ISO 527	MPa	Moist	
Charpy impact strength (+23 °C)	ISO 179/IeU	kJ/m <sup>2</sup>	Dry	
Charpy impact strength (-40 °C)	ISO 179/IeU	kJ/m <sup>2</sup>	Dry	
Charpy impact strength (notched)	ISO 179/IeA	kJ/m <sup>2</sup>	Dry	
Charpy impact strength (notched)		kJ/m <sup>2</sup>	Moist	
Hardness shore scale D	ISO 868		Dry	
Time yield limit $\sigma$ 1/1000 (23 °C/50% RH)	ISO 899	MPa	Moist	
Time yield limit $\sigma$ 1/1000 (100 °C)	ISO 899	MPa	Dry	
Apparent modulus E C/1000 20 (23 °C/50% RH)	ISO 899	MPa	Moist	

Electrical Properties	Test Standard	Unit	Condition of Specimen	Value
Dielectric constant 1 MHz	IEC 250		Dry	
Dielectric constant	IEC 250		Moist	
Dissipation factor tan $\delta$ (1 MHz)	IEC 250		Dry	
Dissipation factor tan $\delta$	IEC 250		Moist	
Dielectric strength	IEC 243	kV/mm	Dry	
Dielectric strength	IEC 243	kV/mm	Moist	
Volume resistivity	IEC 93	$\Omega \cdot \text{cm}$	Dry	
Volume resistivity	IEC 93	$\Omega \cdot \text{cm}$	Moist	
Surface resistivity ROA	IEC 93	$\Omega$	Dry	
Surface resistivity ROA	IEC 93	$\Omega$	Moist	
Resistance to tracking (KA/KB method)	IEC 112		Dry/Moist	
Resistance to tracking (KC method)	IEC 112		Dry/Moist	

Thermal Properties	Test Standard	Unit	Condition of Specimen	Value
Heat distortion temperature (method A)	ISO 75	°C	Dry	
Heat distortion temperature (method B)	ISO 75	°C	Dry	
Melting point (method A)	ISO 3146	°C		
Max. service temperature for few hours operation		°C		
TEP 5.000 hours (50% of tensile strength) <sup>(1)</sup>	IEC 216	°C		
TEP 20.000 hours (50% of tensile strength) <sup>(1)</sup>	IEC 216	°C		
Thermal coefficient of linear expansion	DIN 53752	1/K $\cdot$ 10 <sup>-5</sup>	Dry	
Thermal conductivity (method A)		W/(K $\cdot$ m)	Dry	
Specific heat	IEC 1006	J/(g $\cdot$ K)	Dry	
Fire performance (flameability according VDE)	VDE 0304		Dry	
Fire performance (flameability of interior materials in passenger cars h>1 mm)	FMVSS 302	mm/min	Moist	
Fire performance (flameability according UL standards, thickness of specimen 1.6 mm)	UL 94			

Friction Properties	Test Standard	Unit	Condition of Specimen	Value
Resistance to wear <sup>(2)</sup>	ISO 7148-2	$\mu\text{m}/\text{km}$	Dry	