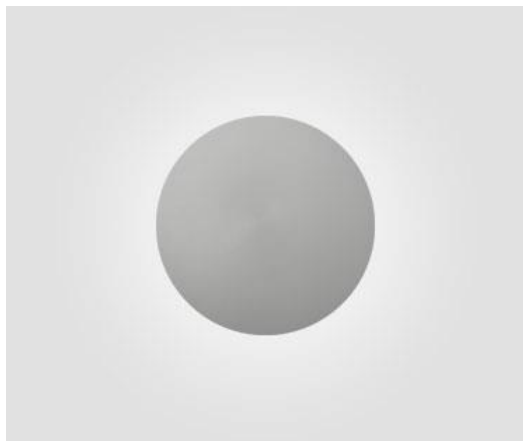


Datasheet AS ZL 900



POM is a semi crystalline thermoplastic and is characterized by a low coefficient of friction and good wear properties, unaffected by wet environments. POM offers good resistance to a wide range of chemicals including many solvents. As water absorption is almost zero, dimensional accuracy and stability is higher than that of nylons. Acetal provides high strength and stiffness coupled with easy machine ability. AS ZL 900 is also noted for its high mechanical strength, heat resistance and good antifriction properties.

AS ZL 900, is according to ASTM D 6100, porosity free and most formulations are approved for contact with food (BfR, FDA compliant). For parts which need to be dimensionally stable even exposed to humidity or wet environments, copolymeric acetal offers better hot water, thermal and chemical resistance than homopolymeric acetal.

AS ZL 900 can also be custom made in various colors.

Used in: Food processing, agriculture, medical, electric, electronic, automotive, general machine building, transport and logistics, bottle and car washing equipment, sports equipment, office machinery, textile.

Applications: Bearings and bushings in humid and wet environments, gears, guide rollers in lift gate systems, levers, springs, snap connectors, cam switches, clamps, pump components, mud handling equipment, instrument handles.

(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/mm² 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	POM copolymer
Color	White

Availability*	Unit	Value
Rod diameter	mm	6-500
Tube O.D.	mm	25-500
Sheet thickness	mm	0.5-150

Physical Properties	Test Standard	Unit	Condition of Specimen	Value
Mass density (method D and E)	ISO 1183	g/cm ³	Dry	1.41-1.43
Moisture absorption at 23 °C and 50% RH (saturation)	ISO 62	%		0.2
Water absorption at 23 °C (saturation)	ISO 62	%		0.25

Mechanical Properties	Test Standard	Unit	Condition of Specimen	Value
Tensile strength at break	ISO 527	MPa	Dry	70
Tensile strength at break	ISO 527	MPa	Moist	-
Elongation at break	ISO 527	%	Dry	40
Elongation at break	ISO 527	%	Moist	-
Modulus of elasticity in tension	ISO 527	MPa	Dry	3000
Modulus of elasticity in tension	ISO 527	MPa	Moist	-
Charpy impact strength (+23 °C)	ISO 179/IeU	kJ/m ²	Dry	No break
Charpy impact strength (-40 °C)	ISO 179/IeU	kJ/m ²	Dry	80
Charpy impact strength (notched)	ISO 179/IeA	kJ/m ²	Dry	-
Charpy impact strength (notched)		kJ/m ²	Moist	-
Hardness shore scale D	ISO 868		Dry	81
Time yield limit σ 1/1000 (23 °C/50% RH)	ISO 899	MPa	Moist	14
Time yield limit σ 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	3.8
Dielectric constant	IEC 250		Moist	-
Dissipation factor tan δ (1 MHz)	IEC 250		Dry	0.024
Dissipation factor tan δ	IEC 250		Moist	-
Dielectric strength	IEC 243	kV/mm	Dry	>20
Dielectric strength	IEC 243	kV/mm	Moist	-
Volume resistivity	IEC 93	$\Omega \cdot \text{cm}$	Dry	10 ¹⁵
Volume resistivity	IEC 93	$\Omega \cdot \text{cm}$	Moist	-
Surface resistivity ROA	IEC 93	Ω	Dry	-
Surface resistivity ROA	IEC 93	Ω	Moist	-
Resistance to tracking (KA/KB method)	IEC 112		Dry/Moist	KB>600
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	110
Heat distortion temperature (method B)	ISO 75	°C	Dry	160
Melting point (method A)	ISO 3146	°C		164-168
Max. service temperature for few hours operation		°C		-
TEP 5.000 hours (50% of tensile strength) ⁽¹⁾	IEC 216	°C		-
TEP 20.000 hours (50% of tensile strength) ⁽¹⁾	IEC 216	°C		100
Thermal coefficient of linear expansion	DIN 53752	1/K·10 ⁻⁵	Dry	11
Thermal conductivity (method A)		W/(K·m)	Dry	-
Specific heat	IEC 1006	J/(g·K)	Dry	1.5
Fire performance (flameability according VDE)	VDE 0304		Dry	BH 3-25 mm/min
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			HB

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