

YUNTIANHUA® M90

Acetal (POM) Copolymer



云南云天化股份有限公司
YUNNAN YUNTIANHUA CO., LTD

General

Material Status	Standard-flow grade, with minimized mold deposit		
Features	<ul style="list-style-type: none">• Acid Resistant• Bacteria Resistant• Base Resistant• Solvent Resistant• Fatigue Resistant	<ul style="list-style-type: none">• Good Abrasion Resistance• Good Chemical Resistance• Good Dimensional Stability• Good Electrical Properties• Good Flow	<ul style="list-style-type: none">• High Hardness• High Stiffness• Low Friction• Low Warpage• Copolymer
Uses	<ul style="list-style-type: none">• Automotive Electronics• Automotive Exterior Parts• Automotive Under the Hood• Bearings	<ul style="list-style-type: none">• Fittings• Gears• Piping• Pump Parts	<ul style="list-style-type: none">• Thin-walled Parts• Valves/Valve Parts• Wheels
Forms	<ul style="list-style-type: none">• Pellets		
Processing Method	<ul style="list-style-type: none">• Injection Molding and Extrusion		

Physical properties	Value	Unit	Test Standard
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Density	1.41	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (190°C/2.16Kg)	9	g/10min	ISO 1133
Water Absorption (24 hr, 23°C)	0.6	%	ISO 62

Mechanical properties	Value	Unit	Test Standard
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Tensile Stress at yield	60	MPa	ISO 527-2
Tensile modulus	2600	MPa	ISO 527-2
Strain at break	35	%	ISO 527-2
Flexural strength	88	MPa	ISO 178
Flexural modulus	2500	MPa	ISO 178
Charpy notched impact strength	6	KJ/m ²	ISO 179/1eA

Thermal properties	Value	Unit	Test Standard
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Heat Deflection Temperature (1.8Mpa, Unannealed)	95	°C	ISO 75
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Flammability properties	Value	Unit	Test Standard
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Flame Rating-UL	HB	class	UL94
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Notes to users

Values shown are based on testing of laboratory test specimens and represent data that fall within the standard range of properties for natural material. These values alone do not represent a sufficient basis for any part design and are not intended for use in establishing maximum, minimum, or ranges of values for specification purposes. Colorants or other additives may cause significant variations in data value.



Recommended Injection Molding Conditions

- Material Drying : 80 – 90°C, 3-4 hours
- Cylinder Temperature:
 - Nozzle : 180 - 210 (°C)
 - Front Section : 190 – 210 (°C)
 - Center Section : 170 – 200 (°C)
 - Rear Section : 160 – 180 (°C)
- Melt Temperature : 180 – 210 (°C)
- Mold Temperature : 60 – 90 (°C)
(Precision parts are often made at a mold temperature as high as 120°C)
- Pressure :

Injection Pressure	50 – 100 Mpa
Holding Pressure	30 – 80 Mpa
Back Pressure	0 – 0.5 MPa
- Screw Rotational Speed : 50 – 120 rpm

Recommended Extruded Conditions

- Standard extruders with grooved feed zone and short compression screws (minimum 25 D) will fit.
Melt temperature : 180 - 190°C

Acquired Certifications of Yuntianhua POM

- RoHS test
- PFOS test
- Certification FDA
- Certification UL
- Certification W18 test
- EN71-3 test

For details, please contact Yuntianhua technicians.

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