

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

Physical properties	Value	Unit	Test Standard
Density	1.41	g/cm <sup>3</sup>	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
Tensile Stress at yield	62	MPa	ISO 527-2
Tensile modulus	2650	MPa	ISO 527-2
Strain at break	35	%	ISO 527-2
Flexural strength	88	MPa	ISO 178
Flexural modulus	2600	MPa	ISO 178
Charpy notched impact strength	6.0	KJ/m <sup>2</sup>	ISO 179/1eA
Thermal properties	Value	Unit	Test Standard
Heat Deflection Temperature 1.8Mpa, Unannealed	95	°C	ISO 75
Flammability properties	Value	Unit	Test Standard
Flame Rating-UL	HB	class	UL94

### 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 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 (min. 25 D) will fit.

Melt temperature : 180 - 190°C

## Acquired Certifications of Yuntianhua POM

• RoHS test

• PFOS test

• Halogen element test

• SVHC test

• DMF test

• EN1186btest

• DBT&TBT test

• EN71-3 test

• Certification W18 test

• Certification FDA

• Certification UL

• Certification NSF

For details, please contact Yuntianhua technicians.

## Contact information

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