

# YUNTIANHUA®M25

Acetal (POM) Copolymer



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

## General

Material Status	High-impact, high-elongation grade, with increased molecular weight		
Features	<ul style="list-style-type: none"><li>• Acid Resistant</li><li>• Bacteria 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></ul>	<ul style="list-style-type: none"><li>• High Hardness</li><li>• High Stiffness</li><li>• Low Friction</li><li>• Low Warpage</li></ul>
Uses	<ul style="list-style-type: none"><li>• Extruded rods</li></ul>	<ul style="list-style-type: none"><li>• Extruded sheets</li></ul>	<ul style="list-style-type: none"><li>• roller conveyor parts</li></ul>
Forms	<ul style="list-style-type: none"><li>• Pellets</li></ul>		
Processing Method	<ul style="list-style-type: none"><li>• Injection Molding and Extrusion</li></ul>		

## 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)	2.5	g/10min	ISO 1133
Water Absorption (24 hr, 23°C)	0.6	%	ISO 62

## Mechanical properties

	Value	Unit	Test Standard
Tensile Stress at yield	59	MPa	ISO 527-2
Tensile modulus	2550	MPa	ISO 527-2
Strain at break	40	%	ISO 527-2
Flexural strength	81	MPa	ISO 178
Flexural modulus	2350	MPa	ISO 178
Charpy notched impact strength	7.0	KJ/m <sup>2</sup>	ISO 179/1eA

## Thermal properties

	Value	Unit	Test Standard
Heat Deflection Temperature 1.8Mpa, Unannealed	90	°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 (minimum 25 D) will fit.  
Melt temperature : 180 - 190°C

### Acquired Certifications of Yuntianhua POM

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