

## POM M90 WHITE - Stock Shapes (rods, plates, tubes)

**POLYACETAL** engineering plastic extruded stock shapes available in **POM M90** is part of high-performance engineering plastic products offered under trade name **POLYMAT** for machining into industrial components. These products are made using the best raw material in modern production facility under strict quality confirming to international standards.

Polyacetal, also known as Polyoxymethylene (POM) is crystalline fluorinated thermoplastic with high tensile strength, stiffness, resiliency, low coefficient of friction and very low moisture absorption. This broad range of useful properties in addition to its ability to retain properties over long period under elevated temperature, mechanical stresses and demanding environmental conditions make it an engineering plastic of choice for many applications which exhibits excellent chemical resistance to mineral and organic acids, hydrocarbons and solvents. Its mechanical toughness, very low moisture absorption, wide range of service temperature from -40°C to 150°C, good wear resistance, low coefficient of friction, resistance to UV, self-extinguishing nature and transparency to radiation renders it useful in host of applications in chemical processing, food, pharmaceutical and paper manufacturing.

PEEK is amenable to standard metal working machine tools and can be fabricated with ease to yield smooth surface finish and close tolerances. Information on technical properties for designers is provided below. More specific data and engineering assistance is available upon request.

### **Chemical Designation** POM M90 (Polyacetal) Color Black Opaque

#### **Main features**

- Outstanding wear resistance and sliding properties.
- Excellent machinability
- High mechanical strength and stability
- Good creep resistance
- Good resistance to hydrolysis
- Food contact applications
- Good dimensional stability
- Noncontaminating

#### **Target Industries**

- Gears, Cams, Bearings
- Rollers & Sprockets
- Food Industry
- Guide & Wear Profiles
- Insulating components
- Parts for Humid Environment
- Underwater Components
- Automotive industry
- Electrical Insulating Parts

• Mechanical properties	Parameter	Value	Unit	Norm
Tensile modulus	1mm/min	2760	MPa	ISO 527-2/1A
Tensile Stress yield	50mm/min	66	MPa	ISO 527-2/1A
Tensile strain at yield	50mm/min	10	%	ISO 527-2/1A
Tensile Creep Modulus	1h	2450	MPa	ISO 899-1
Tensile Creep Modulus	1000h	1350	MPa	ISO 899-1
Flexural Modulus	23°C	2550	MPa	ISO 178
Charpy Impact Strength	23°C	188	kJ/m <sup>3</sup>	ISO 179/1eU
Charpy Impact Strength	30°C	181	kJ/m <sup>3</sup>	ISO 179/1eU
Charpy Notched Impact Strength	23°C	6	kJ/m <sup>3</sup>	ISO 179/1eU
Charpy Notched Impact Strength	30°C	6	kJ/m <sup>3</sup>	ISO 179/1eU
Notched Impact Strength Izod	23°C	5.7	MPa	ISO 180/1A
• Electrical properties	Parameter	Value	Unit	Norm
Volume resistivity		8.00E+12	Ω*m	IEC 60093
Surface resistivity		3.00E+16	Ω	IEC 60093
	0.45MPa	185	°C	
• Thermal properties	Parameter	Value	Unit	Norm
Melting Temperature	10°C/min	165	°C	ISO 11357-1, -2,-3
DTUL	1.8MPa	101	°C	ISO 75-1/-2
Volume resistivity	0.45MPa	185	°C	IEC 60093
Coefficient of Thermal expansion	(parallel)	1.2	E-4/°C	ISO 11359-2
Coefficient of Thermal expansion	normal	1.2	E-4/°C	ISO 11359-2
Density		1410	kg/m <sup>3</sup>	ISO 1183

➤ POM M90 products may be based on KEPITAL®.