TechData@readyplastics.com
774 489 6842

ACETAL HOMOPOLYMER

ASTM D4181 POM0110 | ROHS / REACH

Polyoxymethylene Homopolymer (POM-H)

Precision homopolymer for precision parts.

Acetal homopolymer is a high-crystallinity semi-crystalline thermoplastic with the highest stiffness, tensile strength, and creep resistance in the acetal family. It is specified when maximum mechanical performance and tight tolerances are needed in dry, neutral chemistry service.

APPLICATIONS

- Precision gears, cams, and timing components
- Spring elements and clip features
- Fluid-handling and pump components
- Bearings and bushings in dry service
- Replacement of die-cast metal in precision roles

STANDARD COLORS

Dark Brown Opaque

GENERAL

Density ISO 1183	1.49 g/cm³ 0.053 lb/in³
Water absorption 24h / 96h (23°C) · ISO	0.05 / 0.1 %

MECHANICAL

Tensile strength 50mm/min · ISO	53 MPa 7,600 psi
Tensile modulus 1mm/min · ISO	3000 MPa 435,000 psi
Elongation at yield 50mm/min · ISO	8 %
Elongation at break 50mm/min · ISO	8 %
Flexural strength 2mm/min, 10 N · ISO	85 MPa 12,000 psi
Flexural modulus 2mm/min, 10 N · ISO	3000 MPa 435,000 psi
Impact strength (Charpy) max. 7,5J · ISO	n.b. kJ/m²
Shore hardness D · ISO	81

OPERATING ENVIRONMENT

Flammability (UL 94) corresponding to · IEC	HB
Glass transition temp. ISO	-60 °C -76 °F
Melting temperature ISO	179 °C 350 °F
Heat deflection temp. HDT, Method A · ISO-R	141 °C 285 °F
Service temperature short term	150 °C 300 °F
Service temperature long term	110 °C 230 °F
Specific heat capacity ISO	1.3 J/g·K 0.31 Btu/(lb·°F)
Thermal conductivity ISO	0.46 W/m·K 3.1 Btu·in/ft²·h·°F

ELECTRICAL

Surface resistivity	10^{14} Ω

The information provided herein is for informational purposes only and does not constitute a representation or warranty of suitability for any specific application. Ready Plastics LLC makes no warranties, express or implied, including but not limited to warranties of merchantability or fitness for a particular purpose. Test data for a specific batch or sheet may be available upon request for an additional fee and must be negotiated separately. Our full disclaimer is available at https://readyplastics.com/disclaimer