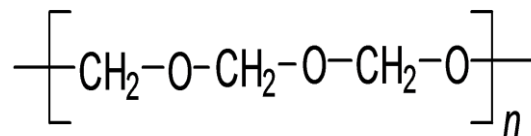


Polyoxymethylene (POM)



SPECIFICATIONS

Property	Spec	Value
Continuous allowable service temperature in air (20,000 hrs)		100°C 180°F
Min. Service Temperature		-50°C
Tensile Strength	ASTM D638	9,500 psi
Tensile modulus of elasticity	ASTM D638	400,000 psi
Shear Strength	ASTM D732	8,000 psi
Rockwell hardness	ASTM D785	84M
Density	ISO 1183-1	1.41 g/cm ³
Water absorption after 24h Immersion in water 23°C (73°F)	ASTM D570	0.20%
Water absorption at saturation in air of 23°C (73°F) / 50% RH		0.20 %
Water absorption at saturation in water of 23°C (73°F)	ASTM D570	0.90%
Wear Rate	QTM 55010	2.0 E-08 in ³ min/ft.Ins.hr.
Dynamic Coefficient of Friction (-)	QTM 55007	0.25
Color		Black

DESCRIPTION

ML19 is a POM material with hardness 84M. Acetal or Polyoxymethylene (POM) belongs to the polyether family which contains carbon-oxygen-carbon (-C-O-C-) ether linkages in the polymer backbone. Acetal or POM refers to the polyether with only one carbon (methylene) in between ether linkages. To improve its low thermal stability for commercial use, POM has to be chemically modified by one of two means. The first is to modify the ends of polymer chains to yield the corresponding POM homopolymer (POM-H). The second method is to add 1%-2% ethylene oxide to the polymer chain that results in POM copolymer (POM-C). POM possesses a simple regular backbone, thus it is a highly crystalline polymer. This chemical and morphological structure leads to high mechanical strength, low moisture absorption, high dimensional stability, and good chemical resistance.