

Material Data Sheet












POM-C ELS

Chemical Designation : Polyoxymethylene (Copolymer)
DIN-Abbreviation: POM-C
Colours, fillers: black, carbon black

Main features

-  electrically conductive
 -  strong
 -  resistant to cleaning agents
 -  difficult to bond
 -  easily machined
 -  rigid
 -  resistant to numerous solvents
 -  tough
 -  wear resistant
 -  UV and weather resistant
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Preferred Fields

-  explosion protection
 -  chemical engineering
 -  mechanical engineering
 -  transport and conveyor technology
 -  textile machinery
 -  electronics
 -  electrical protection
 -  mining industry
 -  automotive engineering
 -  packaging and paper processing machinery
 -  electrical engineering
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Applications

Tool carriers, friction strips, housing parts, friction bearings, gears, plug housings, rollers, seals, electrically conductive functional parts, skids

Properties

Mechanical

	dry / moist		standard
Tensile strength at yield	50	MPa	DIN EN ISO 527
Elongation at yield		%	
Tensile strength at break		MPa	
Elongation at break	15	%	DIN EN ISO 527
Modulus of elasticity in tension	2000	MPa	DIN EN ISO 527
Modulus of elasticity after flexural test		MPa	
Hardness	M97		ISO 2039/2 (Rockwell-Härte)
Impact strength 23° C (Charpy)	>1000	KJ/m ²	DIN EN ISO 180 (Izod)
Creep rupture strength after 1000 h with static load		MPa	
Time yield limit for 1% elongation after 1000 h		MPa	
Co-efficient of friction p = 0,05 N/mm ² v=0,6 m/s on steel, hardened and ground			
Wear p = 0,05 N/mm ² v=0,6 m/s on steel, hardened and ground		µm/km	

Thermal

	dry / moist		standard
Crystalline melting point		°C	
Glass transition temperature	-60	°C	DIN 53 765
Heat distortion temperature HDT, Method A	89	°C	ISO-R 75 Verfahren A (DIN 53 461)
Heat distortion temperature HDT, Method B		°C	
Max. service temperature			
short term	140	°C	
long term	100	°C	
Thermal conductivity (23° C)		W/(K·m)	
Specific heat (23° C)		J/g.K	
Coefficient of thermal expansion (23-55°C)	11	10 ⁻⁵ 1/K	DIN 53 752

Properties

Electrical	dry / moist		standard
Dielectric constant (10^6 Hz)			
Dielectric loss factor (10^6 Hz)			
Specific volume resistance	10^2 – 10^4	$\Omega \cdot \text{cm}$	DIN IEC 60093
Surface resistance	10^2 – 10^4	Ω	DIN IEC 60093
Dielectric strength		kV/mm	
Resistance to tracking			

Miscellaneous	dry / moist		standard
Density	1,45	g/cm^3	DIN 53 479
Moisture absorption (23°C/50RH)		%	DIN EN ISO 62
Water absorption to equilibrium	0,5	%	DIN EN ISO 62
Flammability acc. to UL standard 94	HB		

(1) Testing of semi-finished products

The above information corresponds with our current knowledge and indicates our products and possible applications. We cannot give a legally binding guarantee of chemical resistance, of certain properties and the suitability of our products and their applications. Our products are not destined for use in medical and dental implants. Existing commercial patents must be observed. Unless otherwise stated, these values represent averages taken from injection moulding samples, dry as moulded. We reserve the right to make technical alterations.
