Material Data Sheet

POM-C black

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

Main features

- strong
- resistant to cleaning agents
- good sliding properties
- easily welded
- easily polished
- rigid
- resistant to numerous solvents
- difficult to bond
- easily machined
- not electrically insulating

Preferred Fields

- mechanical engineering
- transport and conveyor technology
- precision engineering
- automotive engineering
- packaging and paper processing machinery
- jig manufacturing

Applications

Friction bearings, friction strips, gears, housings, tool supports, agitators and kneeding elements, housing parts, seals, rollers

Properties

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Mechanical	**dry / moist**		**standard**
Tensile strength at yield	55	MPa	DIN EN ISO 527
Elongation at break	30	%	DIN EN ISO 527
Modulus of elasticity in tension	2100	MPa	
Hardness	145		DIN 53 456 (Kugeldruckhärte)
Impact strength 23° C (Charpy)	n.b.	KJ/m²	DIN EN ISO 179 (Charpy)
Creep rupture strength after 1000 h with static load	40	MPa	
Time yield limit for 1% elongation after 1000 h	13	MPa	
Co-efficient of friction p = 0,05 N/mm²v=0,6 m/s on steel, hardened and ground	0,32		
Wear	8,9	µm/km	

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on steel, hardened and ground

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Thermal	**dry / moist**		**standard**
Glass transition temperature	-60	°C	DIN 53 765
Heat distortion temperature HDT, Method A	110	°C	ISO-R 75 Verfahren A (DIN 53 461)
Heat distortion temperature HDT, Method B	160	°C	ISO-R 75 Verfahren B (DIN 53 461)
Max. service temperature			
short term	140	°C	
long term	100	°C	
Thermal conductivity (23° C)	0,31	W/(K·m)	
Specific heat (23° C)	1,5	J/g.K	
Coefficient of thermal expansion (23-55°C)	10	10^{-5}1/K	DIN 53 752

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Electrical	**dry / moist**		**standard**
Dielectric constant (10^6 Hz)	3,5		DIN 53 483, IEC-250
Dielectric loss factor (10^6 Hz)	0,003		DIN 53 483, IEC-250
Specific volume resistance	10^14	Ω*cm	DIN IEC 60093
Surface resistance	10^14	Ω	DIN IEC 60093

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Miscellaneous	**dry / moist**		**standard**
Density	1,41	g/cm^3	DIN 53 479
Moisture absorption (23°C/50RH)	< 0,3	%	DIN EN ISO 62
Water absorption to equilibrium	0,5	%	DIN EN ISO 62
Flammability acc. to UL standard 94	HB		
Resistance to hot water, washing soda:	(+)		
Resistance to weathering	-		

(1) Testing of semi-finished products