

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 kneading elements, housing parts, seals, rollers

Properties

Material Data Sheet	POM-C black		
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/m ²	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/mm ² v=0,6 m/s on steel, hardened and ground	0,32		
Wear	8,9	µm/km	

p = 0,05 N/mm²v=0,6 m/s
on steel, hardened and ground

Material Data Sheet

POM-C black

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

Material Data Sheet

POM-C black

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

Material Data Sheet

POM-C black

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

All information supplied by or on behalf of Merrem Materials or Merrem Kunststoffen in relation to its products, in any form, is supported by research and believed to be reliable, but Merrem Materials or Merrem Kunststoffen assumes no liability whatsoever in respect of application, processing or use made of the aforementioned information or products, or any consequence there of. The buyer undertakes all liability in respect of the application, processing or use of the aforementioned information or product, whose quality and other properties he shall verify, or any consequence there of. No liability whatsoever shall attach to Merrem Materials or Merrem Kunststoffen for any infringement of the rights owned or controlled by a third party intellectual, industrial or other property by reason of the application, processing or use of the aforementioned information or products by the buyer.
