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Datasheet
Engineering Plastics
Multiplast PEEK PVX

Stock Availability:
Standard lengths 3 metres, also cut to size Rod 5 - 100 mm diameter Plate 6 - 80 mm thick Tube Profile Finished, machined or moulded parts

Preferred Fields:
Mechanical and automotive engineering, transport and conveyor, packaging and paper processing machinery, textile machinery, chemical engineering, maintenance engineering, precision engineering, aircraft and aerospace industries, pumps and instrument manufacture.

Materialdescription:	
DIN Abbreviation:	PEEK PVX
Chemical Designation:	Polyetheretherketon
Colour, Filler:	Black, Carbon fibre + PTFE + Graphite

Multiplast Peek PVX is a filled semicrystalline high performance thermoplastic for highly demanding applications.

- High thermal and mechanical capacity
- Excellent sliding properties
- Easily machined
- Hydrolysis resistant, even against superheated steam
- Very creep resistant
- Very abrasion resistant
- Flame retarding according to UL94 V-0
- Good chemical resistance

Applications:

- friction bearings
- static/dynamic high loaded parts
- gears
- slide shoes
- chain bearings
- ball valve seals
- pump housings
- control pistons
- pump impellers

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Properties	Unit	Test method DIN /ISO/ ASTM	Value	
Mechanical				
Density	g/cm^3	53 479	1.48	
Tensile strength at yield	Mpa			
Tensile strength at break	Mpa	DIN EN ISO 527	130	
Elongation at break	%	DIN EN ISO 527	1,5	
Modulus of elasticity in tension	Mpa	DIN EN ISO 5278	9500	
Modulus of elasticity after flexure test	Mpa	DIN EN ISO 178		
Ball indentation hardness, 961 N	Mpa	DIN 53456	208	
Impact strength 23°C (Charpy)	KJ/m^2	DIN EN ISO 179	30	
Creep rupture strength after 1000 hrs with static load	Mpa			
Time yield limit for 1% elongation after 1000 hrs.	Mpa			
Coefficient of friction against hardened and ground steel p = 0,05 N/mm$_2$, v = 0,6 m/s	-		0,11	
Wear conditions as above	µm/km			
Thermal				
Crystalline melting point	°C		343	
Glass transition temperature	°C	53 765	143	
Heat distortion temperature Method A Method B	 °C °C	ISO–R 75A	277	
Max. service temperature short term long term	 °C °C		 300 260	
Coefficient of thermal conductivity (23°C)	W/(m . K)		0,24	
Specific heat (23°C)	J/(g . K)			
Coefficient of thermal expansion (23°C-55°C)	10^{-5} /K	DIN 53752	2,2	
Electrical			Dry	Moist
Dielectric constant at 10^5 Hz				
Dielectric loss factor at 10^5 Hz				
Specific volume resistance				
Surface resistance				
Dielectric strength 1 mm	Ω . cm	DIN IEC 60093	3x10^5	5x10^6
Tracking resistance	Ω	DIN IEC 60093	5x10^6	
Miscellaneous				
Moisture absorption: Equilibrium in standard atmosphere (23 °C / 50 % relative humidity)	%	DIN EN ISO 62	0,1	
Water absorption to equilibrium	%	DIN EN ISO 62	0,1	
Resistance to hot water, washing soda				
Flammability		UL 94	V0	
Resistance to weathering				
* after storage in a standard 23/50 atmosphere (DIN 50 014) to equilibrium				

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