Material Data Sheet

PP grey

Chemical Designation :	Polypropylene
DIN-Abbreviation:	PP
Colours, fillers:	grey

Main features

- very low moisture absorption
- easily welded
- resistant to cleaning agents and xxx acids
- low hardness
- good sliding properties
- difficult to bond
- very good electrical insulation

Preferred Fields

- mechanical engineering
- domestic appliance
- food technology
- electrical engineering
- automotive engineering
- packaging and paper processing machinery
- building machinery
- construction industry

Applications

Housings, mountings, distance rings, fittings, accumulator cases, covering plates, dyer spools, insulating profiles, containers, sound insulation ledges

Properties

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Mechanical	**dry / moist**		**standard**
Tensile strength at yield	30	MPa	DIN EN ISO 527
Modulus of elasticity in tension	1600	MPa	DIN EN ISO 527
Hardness	80		DIN 53 456 (Kugeldruckhärte)
Impact strength 23° C (Charpy)	n.b.	KJ/m²	DIN EN ISO 179
Creep rupture strength after 1000 h with static load	22	MPa	
Time yield limit for 1% elongation after 1000 h	4	MPa	
Co-efficient of friction p = 0,05 N/mm²v=0,6 m/s on steel, hardened and ground	0,3		
Wear p = 0,05 N/mm²v=0,6 m/s	11	µm/km	

on steel, hardened and ground

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Thermal	**dry / moist**		**standard**
Crystalline melting point	165	°C	DIN 53 765
Glass transition temperature	-18	°C	DIN 53 765
Heat distortion temperature HDT, Method A	65	°C	ISO-R 75 Verfahren A (DIN 53 461)
Heat distortion temperature HDT, Method B	105	°C	ISO-R 75 Verfahren B (DIN 53 461)
Max. service temperature			
short term	140	°C	
long term	100	°C	
Thermal conductivity (23° C)	0,22	W/(K·m)	
Specific heat (23° C)	1,7	J/g.K	
Coefficient of thermal expansion (23-55°C)	17	10^{-5}1/K	DIN 53 752

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Electrical	**dry / moist**		**standard**
Dielectric constant (10^6 Hz)	2,25		DIN 53 483, IEC-250
Dielectric loss factor (10^6 Hz)	0,0002		DIN 53 483, IEC-250
Specific volume resistance	> 10^14	Ω*cm	DIN IEC 60093
Surface resistance	> 10^13	Ω	DIN IEC 60093
Dielectric strength	>40	kV/mm	DIN 53 481, IEC-243, VDE 0303 Teil 2
Resistance to tracking	KA 3c		DIN 53 480, VDE 0303 Teil 1

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Miscellaneous	**dry / moist**		**standard**
Density	0,91	g/cm^3	DIN 53 479
Moisture absorption (23°C/50RH)	<0,1	%	DIN EN ISO 62
Water absorption to equilibrium	<0,1	%	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