

## Material Data Sheet










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# PP grey









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

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### Main features

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

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

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

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### Properties

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<b>Mechanical</b>	<b>dry / moist</b>		<b>standard</b>
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/m <sup>2</sup>	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/mm <sup>2</sup> v=0,6 m/s on steel, hardened and ground	0,3		
Wear p = 0,05 N/mm <sup>2</sup> v=0,6 m/s	11	µm/km	

on steel, hardened and ground

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<b>Thermal</b>	<b>dry / moist</b>		<b>standard</b>
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 <sup>-5</sup> /K	DIN 53 752

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<b>Electrical</b>	<b>dry / moist</b>		<b>standard</b>
Dielectric constant (10 <sup>6</sup> Hz)	2,25		DIN 53 483, IEC-250
Dielectric loss factor (10 <sup>6</sup> Hz)	0,0002		DIN 53 483, IEC-250
Specific volume resistance	> 10 <sup>14</sup>	Ω*cm	DIN IEC 60093
Surface resistance	> 10 <sup>13</sup>	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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<b>Miscellaneous</b>	<b>dry / moist</b>		<b>standard</b>
Density	0,91	g/cm <sup>3</sup>	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

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