

## Material Data Sheet










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# PA6 GF30 black









Chemical Designation : Polyamide  
 DIN-Abbreviation: PA 6 GF 30  
 Colours, fillers: black, 30% glass fibres

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### Main features

-  very strong
  -  resistant to many oils, greases, diesels and petrol
  -  very tough
  -  good heat deformation resistance
  -  UV and weather resistant
  -  easily welded
  -  easily bonded
  -  high dimensional stability
  -  easily machined
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### Preferred Fields

-  mechanical engineering
  -  transport and conveyor technology
  -  gears, couplings and engine construction
  -  domestic appliance
  -  automotive engineering
  -  electrical engineering
  -  precision engineering
  -  packaging and paper processing machinery
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### Applications

sealings, fixing parts, spacers

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### Properties

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Material Data Sheet	PA6 GF30 black		
<b>Mechanical</b>	<b>dry / moist</b>		<b>standard</b>
Tensile strength at break	140 / 110	MPa	DIN EN ISO 527
Elongation at break	2,5 / 5	%	DIN EN ISO 527
Modulus of elasticity in tension	8500 / 6000	MPa	DIN EN ISO 527
Hardness	147		DIN 53 456 (Kugeldruckhärte, 358N)
Impact strength 23° C (Charpy)	55	KJ/m <sup>2</sup>	DIN EN ISO 179 (Charpy)
Time yield limit for 1% elongation after 1000 h	21-35	MPa	
Co-efficient of friction p = 0,05 N/mm <sup>2</sup> v=0,6 m/s on steel, hardened and ground	0,46-0,52		

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<b>Thermal</b>	<b>dry / moist</b>		<b>standard</b>
Glass transition temperature	60 / 5	°C	DIN 53 765
Heat distortion temperature HDT, Method A	210	°C	ISO-R 75 Verfahren A (DIN 53 461)
Heat distortion temperature HDT, Method B	220	°C	ISO-R 75 Verfahren B (DIN 53 461)
Max. service temperature			
short term	180	°C	
long term	100	°C	
Thermal conductivity (23° C)	0,28	W/(K·m)	
Specific heat (23° C)	1,5	J/g.K	
Coefficient of thermal expansion (23-55°C)	2-3	10 <sup>-5</sup> 1/K	

Material Data Sheet

PA6 GF30 black

<b>Electrical</b>	<b>dry / moist</b>		<b>standard</b>
Specific volume resistance	10 <sup>13</sup>	Ω*cm	
Surface resistance	10 <sup>13</sup>	Ω	

Material Data Sheet

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<b>Miscellaneous</b>	<b>dry / moist</b>		<b>standard</b>
Density	1,35	g/cm <sup>3</sup>	DIN 53 479
Moisture absorption (23°C/50RH)	2,1	%	DIN EN ISO 62
Water absorption to equilibrium	6,6	%	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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