Polyamide (PA 6.6); Polyamide with 50% glass fibre (PA 6.6 GF 50)

Short designation	PA 6.6	PA 6.6 GF 50
Description	Polyamide (polycondensate)	Polyamide with 50% glass fibre
Mechanical properties		
Test specimen condition	dry/damp	dry/damp
Tensile strength [MPa]	no info	230/180
Elastic modulus (tensile) [MPa]	3100/1100	16000/12500
Ball indentation hardness [MPa]	160/100	300/260
Physical properties		
Density [g/cm^3]	1.14	1.55
Melting point [°C]	260	260
Application temperatures		
Max. temp., short-term [°C]	200	240
Max. temp., continuous [°C]	100	130
Min. application temp. [°C]	-40	-40
Other properties		
FlammabilityaccordingtoUL94	V-2	HB
Water absorption (normal climate) [%]	2.8	1.2
Chemical resistance		
Mineral grease and oils	+	+
Petrol	+	+
Weak/strong acids	o/-	o/-
Weak/strong alkalis	+/o	o/-
Perchloroethylene	+	+
Trichloroethylene	+	+
Acetone	+	+
Alcohols	+	+

Hydrolysis resistance (hot water)	o	o
Weather/UV radiation	o	o
Main uses	Like polyamide 6, polyamide 6.6 (PA 6.6) is a semi-crystalline thermoplastic. However, its mechanical properties are somewhat better than those of PA6. Due to the lower water absorption, this material exhibits lower form changes than PA 6 during „conditioning“ (water absorption due to humidity).	

+ resistant / o conditionally resistant / - not resistant