TECHNICAL DATASHEET

The technical data given in the following tables is for guidance only and does not claim to be definitive.
To establish the suitability of parts and materials offered on our website or in our catalogue, it is suggested that customers make their own tests for which samples are available on request.
Material data sheets are available to customers on request if you require technical data for the raw materials used in the manufacture of our plastic fasteners.

MATERIALS		PA6	PA6-GF	PA6.6	PA6.6-GF	PP	POM	PS	LD-PE	HD-PE	PVDF
Mechanical properties	**Units**										
Density	g/m^3	1,14	1,29	1,14	1,36	0,90	1,40	1,05	0,92	0,95	1,78
Humidity absorption	%	2,6	1,8	2,3	1,70	0,10	0,28	0,1	-	0,10	0,04
Modulus of elasticity	MPa	1100	5300	1800	6700	1000	3000	3200		1100	2300
Hardness	Shore D	75+/-5 sh	-	78+/-5 sh	-	73+/-5 sh	83+/-5 sh	-	45+/-5 sh	70+/-5 sh	78+/-5 sh
Thermic properties											
Normal working temperature	°C	+70 à +100	+100 à +130	+70 à +100	+100 à +130	+100	+85 à +95	50-80	+70	+70 à +80	+100 à 110
Peak temperature	°C	+150 à +170	+180	+180	+180	+140	+140	60-90	+80	+90	+150
Minimum working temperature	°C	-30	-40	-30	-	-30	-40	-	-30	-40	-40
Melting point	°C	+250	+255	+260	+260	+170	+165	+100	+110	+135	+170
Combustibility	UL 94	V2	-	V2	HB	-	HB	HB	-	HB	V0
Electrical properties											
Transversal resistance	Omh x cm	10^{12}	10^{15}	10^{14}	-	10^{17}	10^{15}	10^{16}		10^{17}	10^{14}
Percussion strenght	Kv/mm	30	60	25		50	20		-	50	20

Polyamide 6 and 6.6 - PA

Polyamide is a thermoplastic with excellent material properties. The material is ideal for applications with mechanical loads due to its high strength. Its good thermal and mechanical properties make polyamide one of the most frequently used materials in many branches of industry. Due to its good resistance to chemicals, abrasion and moisture, it is the material of choice for the manufacture of mechanical parts.

Glass filled Polyamide 6 and 6.6 - PA-GF

Glass filled reinforced polyamide is a very versatile material. The material has very good properties in terms of strength and rigidity, is lighter than metals and is therefore well suited for applications where weight savings are required. Good heat and chemical resistance round off the material's profile. Overall, the material offers an excellent combination of strength, lightness and durability.

Polypropylene - PP

PP is a semi-crystalline thermoplastic of the polypropylene type. The most important properties of natural PP are good corrosion resistance, high rigidity and good heat resistance.
It is the ideal material for all connections in acidic environments. We often find this material in the swimming pool industry, in shipbuilding, such as the construction of boats, and in connections that are exposed to salt spray, such as beach installations.
At Bülte, this material is mainly used for the production of fasteners such as bolts, nuts and washers, but also for the construction of bushes and spacers.

Polyacetal - POM

POM is an engineering plastic with a wide range of applications that can be used in many industries.
The main advantages of polyacetal are its high resistance to wear and friction, its high rigidity and its good chemical resistance. The material can be machined very well and is a very easy material to process, especially for turned and milled parts.

High density Polyethylene - HD-PE

HD-PE is a thermoplastic of the high molecular weight polyethylene type, which has better impact strength and wear resistance than PE-LD (Low Density Polyethylene). The advantages are excellent chemical resistance, high mechanical strength, low moisture absorption and good sliding and adhesive properties.
Bülte uses this material mainly for the production of protective elements, but also for fastenings such as screws, nuts and washers.

Polyvinylidene fluoride - PVDF

PVDF is a high-performance plastic known for its mechanical, thermal and chemical properties.
This material has high mechanical strength, very good chemical resistance and very low moisture absorption.
PDVF is ideal for connections in corrosive environments such as the chemical industry, but also in the energy and hydrocarbon sectors.
PVDF ensures safety in the most demanding areas of industry.

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