

## Technical plastics: Polyamide | Polyoxymethylene (PA + POM)

### Application

**PA** for the production of gear wheels | sealing rings | guide elements | pulleys | barrel controllers | pump housings | ball bearing cages | plain bearings ...

**POM** for the manufacture of bearings | piston rings | gaskets | valve bodies | gear parts | gear wheels ...

### Properties

**PA** is a universal plastic, which is used for the construction and maintenance of machines | very high elongation at break | high impact strength | high tensile strength | in total, we distinguish six PA plastics with slightly different properties | continuous operating temperature -40 °C to +90 °C

**POM** is known as a versatile technical plastic. It exhibits high strength and dimensional stability | high impact strength and tensile strength | We distinguish between three POM plastics | continuous operating temperature -50 °C to +140 °C

### Storage

Depending on temperature and humidity, dimensional changes may occur. It is recommended to prepare the plastic for the processing temperature.

### Processing

In order to drill these plastics, the part to be machined should be preheated to 70 °C. During mechanical processing, cracks may occur as a result of released internal stresses. Pre-heat material! Heat is very poorly dissipated via the chip. Good cooling is required.

### Product range

We offer PA and POM as semi-finished products in various dimensions and thicknesses as sheets | solid rods



Properties	Values	
	PA	POM
Density (g/cm <sup>3</sup> )	1.15	1.41
Hardness (Shore Rockwell)	88	84
Water absorption %	0.65/1.22	0.24/0.45
Melting temperature (°C)	+215	+165
Temperature range (°C)	approx. -30 ~ +170	approx. -50 ~ +140
Breaking stress (MPa)	86/-	66/-
Tensile strength (MPa)	88	66
Elongation (%)	5	20
Elongation at break (%)	25	50
Impact strength (kJ/m <sup>2</sup> )	without break	150
Impact toughness (kJ/m <sup>2</sup> )	3,5	7
Ball-impression hardness (N/mm <sup>2</sup> )	165	140
Plunger strength (kV/mm)	25	20
Volume resistivity (Ohm.cm)	>10	>10
Surface resistance (Ohm)	>10	>10
Dielectric constant (at 100 Hz)	3.6	3.8



**Note:** The technical parameters are a planning aid only. In particular, they do not represent guaranteed properties. The information in the data sheet is based on individual measurements and our current knowledge and experience. We reserve the right to make production-related changes.  
Please note that the individual application conditions have an influence on the properties of each individual product. For this reason the customer is obliged to subject the materials to a suitability test. The use of our materials takes place exclusively within the area of responsibility of the user.