

## Polyamide 12 (PA12)

### General

Our PA12 is an amorphous thermoplastic with very low water absorption. This makes PA12 the ideal material in humid environments where high impact strength, good sliding friction properties and good wear resistance are required.

PA12 has a very low density of 1g/cm<sup>3</sup>.

Polyamide 12 is the easiest polyamide type to print due to its very low shrinkage. PA12 has very good resistance to stress cracking and high flexural strength. The material meets the composition requirements of the European Regulation No. 10/2011 on plastic materials for food contact.

#### advantage

- Low water absorption
- Outstanding transparency
- Easier to print than PA6 or PA6.6
- Low distortion
- Low shrinkage
- Excellent stress crack resistance
- Low density

#### disadvantage

- High price
- Lower heat resistance than PA6

### Processing data

#### Printing temperature

250-270 °C

#### Heated bed temperature

100-120 °C

#### Drying temperature

80°C

#### Drying time

4-12h

### Technical specifications

|  |                        |
|--|------------------------|
| Shrinkage (ISO 294-4)                            | 0.45-0.6 %             |
| MFR  | - g/10min              |
| Yield stress (ISO 527)                           | 60 MPa                 |
| Elongation at yield (ISO 527)                    | 6 %                    |
| Elongation at break (ISO 527)                    | 50 %                   |
| Tensile modulus (ISO 527)                        | 1500 MPa               |
| Heat deflection temperature<br>0.45 MPa (ISO 75) | 100 °C                 |
| Vicat softening temperature A<br>(ASTM D1525)    | - °C                   |
| Thermal conductivity 23°C                        | - W/(K*m)              |
| Flammability (IEC 60695-11-10)                   | HB                     |
| Density (ISO 1183)                               | 1.00 g/cm <sup>3</sup> |