

SLS - PA11

Material data sheet for Polyamide (PA11) parts produced by Selective Laser Melting. Accuracy varies according to geometry, part orientation and print size $\pm 0.2\%$ (with lower limit of $\pm 0.1\text{mm}$). Distortion may cause greater deviation.

With SLS and PA11 you can make fully functional assemblies with connecting parts, moving parts, or hinges in one piece. The material has also High mechanical strength and temperature resistance. There is no mechanical ageing of the components and the material is suitable for contact with foodstuff.

| Material Properties | Value | Standard |
|---|------------------------------|--------------|
| Tensile Strength (x/y/z) | 48/48/48 MPa | ISO 527-1/-2 |
| Tensile Modulus (x/y/z) | 1600/1600/1550 MPa | ISO 527-1/-2 |
| Elongation at break (x/y/z) | 18/18/4 % | ISO 527-1/-2 |
| Charpy-notched impact strength x/y/z (23°C) | 7.8/7.8/6.5kJ/m ² | ISO 179/1eA |

| Thermal Properties | Value | Standard |
|--|---------------|----------------|
| Melting temperature (20°C/min) | 210°C | ISO 11357-1/-3 |
| Heat deflection temperature x/y/z (1.80 MPa) | 46/46/47°C | ISO 75-1/-2 |
| Heat deflection temperature x/y/z (0.45 MPa) | 159/159/154°C | ISO 75-1/-2 |

| Other Properties | Value | Standard |
|--------------------------|--------------------------------------|----------|
| Density | 990kg/m ³ | - |
| Achievable part accuracy | $\pm 0.2\%$, or $+0.25\%$ dimension | - |