Selective Laser Sintering (SLS)

Polypropylene (PP)

Key Features

Strength • Fatigue resistance • Chemical resistance

Applications

Prototyping • End-use parts • Automotive • Engineering • Consumer goods

Product Description

Polypropylene (PP) for SLS 3D printing shares properties with injection-molded PP, offering toughness, fatigue resistance, and lightweight characteristics. With exceptionally high elongation at break, PP is well-suited for functional prototypes of snap-fit assemblies or living hinges in automotive components, packaging, and consumer goods, making it an ideal choice for various applications.

Properties

Tensile modulus	1,640 MPa
Ultimate tensile strength	29 MPa
Elongation at break (X/Y, Z)	34, 16%
Flexural strength	37 MPa
Flexural modulus	1,330 MPa
Heat deflection temperature (0.45 MPa)	113°C
Heat deflection temperature (1.80 MPa)	58°C
Vicat softening temperature (ASTM D 1525)	132°C
Density	0.84 g/cm^3
Hardness	70D
Water absorption (printed part, ASTM D570)	0.25%

Reference

For more detailed source information, please consult the original documents linked here and here. We encourage users to verify the data's relevance and suitability for their specific needs.

HP Multi Jet Fusion (MJF)

Polypropylene (PP)

Key Features

Impact resistance • Chemical resistance • Dimensional stability • Weldability

Applications

Prototyping • End-use parts • Automotive • Engineering • Medicine, dentistry • Consumer goods

Product Description

Polypropylene (PP) for MJF technology offers excellent surface resolution and feature details. It boasts fully dense and nearly isotropic mechanical properties, along with outstanding chemical resistance and low moisture absorption. It's ideal for high-volume functional prototypes and limited-run production. Common applications include electronic system housings, guides, grommets, clips, covers, fuel and oil housings, environmental control system components such as fan housings, plenums, ducting, valves, divertors, and vents.

Properties

Tensile modulus	1,600 MPa
Tensile strength	30MPa
Elongation at break (X/Y, Z)	20, 18%
Heat deflection temperature (0.45 MPa)	100°C
Heat deflection temperature (1.80 MPa)	60°C
Density	0.89 g/cm^3

Reference

For more detailed source information, please consult the original document linked here. We encourage users to verify the data's relevance and suitability for their specific needs.