

# Multi Jet Fusion – HP 3D HR PA12 („Polyamide 12“)

Polyamide 12 (PA12) is a high-quality and versatile plastic for additive series production using the Multi Jet Fusion process. The material is mechanically durable, heat-resistant up to approximately 100°C, and chemically stable against most solvents.



## Mechanical Properties:

| Test   | Unit              | Value      | Test Method              |
|--|-------------------|------------|--------------------------|
| Material Density (fabricated) <sup>1</sup>       | g/cm <sup>3</sup> | 1,02       | ASTM D792                |
| Modulus of Elasticity <sup>2</sup>               | MPa               | 1500 ± 200 | DIN EN ISO 527-1:2019-12 |
| Tensile Strength <sup>2</sup>                    | MPa               | 48 ± 5     | DIN EN ISO 527-1:2019-12 |
| Elongation at Break <sup>2</sup>                 | %                 | 13 ± 6     | DIN EN ISO 527-1:2019-12 |
| Izod Impact Strength (3,2 mm, 23°C) <sup>1</sup> | kJ/m <sup>2</sup> | 3,5        | ASTM D256 Methode A      |

## Thermal Properties:

| Test   | Unit | Value | Test Method        |
|--|------|-------|--------------------|
| Melting Temperature <sup>1</sup>                           | °C   | 187   | ASTM D3418         |
| Heat Deflection Temperature (HDT) at 0.45 MPa <sup>1</sup> | °C   | 175   | ASTM D648 Method A |
| Heat Deflection Temperature (HDT) at 1.82 MPa <sup>1</sup> | °C   | 95    | ASTM D648 Method A |

## Electrical Properties:

| Test                             | Unit  | Value            | Test Method |
|----------------------------------|-------|------------------|-------------|
| Dielectric strength <sup>1</sup> | kV/mm | 2,8              | UL 746A     |
| Volume Resistivity <sup>1</sup>  | Ω cm  | 10 <sup>14</sup> | UL 746A     |

<sup>1</sup> Values from manufacturer datasheet

<sup>2</sup> In-house measurements by testing laboratory

