

PA 11 ESD

Material's Technical Data Sheet

Bio-sourced nylon material with heat resistance and ESD functionality. Dedicated for electrostatic safe parts for electronic and automotive industries.

Compatible with:

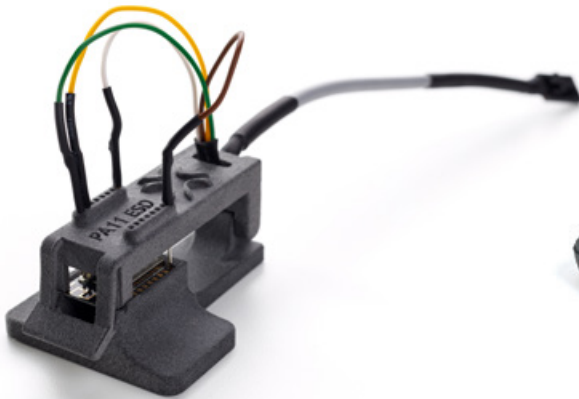


FEATURES

- antistatic properties
- better thermal properties
- dimension stability

APPLICATIONS

- tools and testers in electronics production
- electronic casing
- automotive parts
- high-accuracy parts



General information

Test method

| | | | |
|----------------------------|--------------------------|-------------------|-------------------|
| Material type | Nylon 11 | | |
| Software | Sinterit Studio Advanced | | |
| Nitrogen needed | Yes | | |
| Refresh ratio ² | 60 | % | |
| Colour | grey | | |
| Particle size | 20-80 | µm | ISO 13320 |
| Mean particle size | 45 | µm | ISO 13320 |
| Printout density | 1.03 | g/cm ³ | PN-EN ISO 1183-1 |
| Printout water absorption | 0.16 | % | PN-EN ISO 62:2008 |

1. Available on request.

2. Refresh ratio is the amount of refreshing powder that is required to be mixed after the printing with unsintered material.

Information provided within this document are average values for reference and comparison only. All tests were performed with print samples from Lisa/Lisa Pro printers. Parameters presented in this specification are subject to change without notice. Final part properties may vary based on printed part design, print orientation and material handling.

Mechanical properties

| | | | Test method |
|---|------------------------|-------------------|---------------------------|
| Tensile Strength | 46/50 ³ | MPa | PN-EN ISO 527-2:2012 |
| Elongation at Break | 27/28 ³ | MPa | PN-EN ISO 527-2:2012 |
| Tensile Modulus | 1850/2080 ³ | MPa | PN- EN ISO 527- 2:2012 |
| Flexural Strength | 56 | MPa | PN-EN ISO 178:2019 |
| Flexural Modulus | 1240 | MPa | PN-EN ISO 178:2019 |
| Shore hardness in type D scale | 76 | | PN-EN ISO 868:2005 |
| Impact strength (Charpy method - unnotched) | 59 | kJ/m ² | PN-EN ISO 179- 1/1eU:2010 |

Thermal properties

| | | | Test method |
|---|-----|----|---|
| Melting point | 204 | °C | Internal procedure |
| Heat Deflection Temperature A at 1.8 MPa | 103 | °C | PN-EN ISO 75-2:2013-06 / PN-EN ISO 75-2:1998 |
| Heat Deflection Temperature B at 0.45 MPa | 172 | °C | PN-EN ISO 75-2:2013-06 / PN-EN ISO 75-2:1998 |

ESD properties

| | | | Test method |
|-----------------------------|---------------------|-----|--------------------|
| Specific volume resistance | 1.0×10 ⁵ | Ωcm | IEC 62631-3-1 |
| Specific surface resistance | 5.3×10 ⁴ | Ω | IEC 62631-3-2 |

3. Tested on virgin powder.

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