

POLYPROPYLEN (PP)

Material's Technical Data Sheet

Polypropylene based material with good mechanical properties. Dedicated for prototyping of PP parts, as well as functional parts utilizing chemical resistance, weldability and ductility.



Compatible with:



FEATURES

- great chemical resistance¹
- low density enabling buoyancy
- recyclability
- suitable for pneumatics
- weldability with other PP parts

APPLICATIONS

- automotive industry (reservoirs, piping, housings)
- plastic parts producers (integrate with injection molded PP)
- laboratories (custom chemical tools, i.e. holders or vessels)
- quality, low volume production of low stress parts
- general prototyping of PP parts



1. Complete chemical resistance data in different media available on request.

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.

General information**Test method**

Material type	PP co-polymer		
Software	Sinterit Studio Advanced		
Nitrogen needed	No		
Refresh ratio ²	50	%	
Colour	grey		
Particle size	30-110	µm	ISO 13322
Bulk density	380	kg/m ³	PN-EN ISO 60:2010
Printout density	0.9	g/cm ³	PN-EN ISO 845:2010
Printout water absorption	0.6	%	PN-EN ISO 62:2008

Mechanical properties**Test method**

Tensile Strength	19.3	MPa	PN-EN ISO 527-2:2012
Elongation at Break	44.4	MPa	PN-EN ISO 527-2:2012
Tensile Modulus	824	MPa	PN-EN ISO 527-2:2012
Flexural Strength	25.6	MPa	PN-EN ISO 178:2019
Flexural Modulus	666	MPa	PN-EN ISO 178:2019
Shore hardness in type D scale	50		PN-EN ISO 868:2005
Impact strength (Charpy method - unnotched)	30	kJ/m ²	PN-EN ISO 179-1/1eU:2010

Thermal properties**Test method**

Melting point	135	°C	PN-EN ISO 11357-3:2018
Heat Deflection Temperature A at 1.8 MPa	50	°C	PN-EN ISO 75-2:2013-06 / PN-EN ISO 75-2:1998
Heat Deflection Temperature A at 0.45 MPa	85	°C	PN-EN ISO 75-2:2013-06 / PN-EN ISO 75-2:1998
Softening point (Vicat, A50)	119	°C	PN-EN ISO 3006:2014-02



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

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