Technical Data Sheet

ABS

Maertz ABS filament offers outstanding material properties such as high toughness and chemical resistance. It is ideal for functional prototypes and durable parts but requires a heated print bed to prevent warping.

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Dimensions		
Size	**Ø tolerance**	**Roundness**
1,75 mm	± 0,05 mm	± 0,05 mm
2,85 mm	± 0,10 mm	± 0,10 mm
Material properties		
Description	**Typical value**	**Test method**
Density	1.0044 g/cc	ISO 1183,GB/T 1033
Meltindex (MFR)	23.58/10 min (220 °C/10kg)	ISO 1133,GB/T 3682
Glasstransition temperature	N/A	DSC,10°C/min
Melting temperature	N/A	DSC,10°C/min
Crystallizationtemperature	N/A	DSC,10°C/min
Vicatsofteningtemperature	68°C	ISO306,GB/T1633
Heatdeflectiontemperature	N/A	ISO 75 1.8MPa
Heatdeflectiontemperature	N/A	ISO 75 0.45MPa
Tensile strength at Yield	34.435 MPa	ISO 527, GB/T 1040
Strain at yield	9.982%	ISO 527, GB/T 1040
Strain at break	14.598%	ISO 527, GB/T 1040
E-Modulus	324.911 MPa	ISO 527, GB/T 9341
Bendingmodulus	1836.740MPa	ISO 178, GB/T 9341
Bending strength	55.411MPa	ISO 178, GB/T 9341
Impact strength	11.273kJ/ m²	ISO 179, GB/T 1043
Layer Adhesion (Impact Strength - Z)	1.875 kJ/ m²	ISO 179, GB/T 1043
Moisture absorption	0.13%	ISO 62 23℃, 50% RH

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Guideline for print settings	
Description	**Typical value**
Printing temperature	240 – 280 °C
Build Plate Compatibility	BuildTak®, Glass,BlueTape, PEI
Bed Temperature	90-120℃ (Glue recommended)
Cooling fan	10%
Drying Settings	70-85℃ (Blast Drying Oven)
Printing speed	30-250(mm/s)
AMS Compatibility	YES
Raftseparationdistance	0.2 (mm) (Settings are based on a 0.4mm nozzle)
Retractionspeed	30 (mm/s)
Hotend Compatibility	0.2mm,0.3mm,0.4mm,0.6mm,0.8mm 1.0mm nozzle
Environmentaltemperature	60℃ (Roomtemperature)

Additional info:
The typical values presented in this data sheet are intended for reference and comparison purposes only. They should not be used for design specifications or quality control purposes. Actual values may vary significantly with printing conditions. End- use performance of printed parts depends not only on materials, but also on part design, environmental conditions, printing conditions, etc. Product specifications are subject to change without notice.
Each user is responsible for determining the safety, lawfulness, technical suitability, and disposal/ recycling practices of R3D materials for the intended application. Maertz makes no warranty of any kind, unless announced separately, to the fitness for any use or application.
Maertz shall not be made liable for any damage, injury or loss induced from the use of Maertz materials in any application.
Storage: Cool and dry (15-25˚C) and away from UV light. This enhances the shelf life significantly.
Packaging: All spools are sealed and packed with silica gel to avoid humidity.