

Technical data sheet- ABS 3D filament

Printing features	Parameters
Extrusion temperature	Between 240 and 260°C
Bed temperature	Between 90 and 110°C
Bed type	Micro-perforated plate
Bed surface treatment	Unimportant
Chamber temperature	20 to 50°C
Ventilation	50%
Printing speed	Around 50 – 120 mm/s
Retraction speed	40 mm/s
Retraction distance	0.8 mm
Amount of material retracted	0.5 mm
Printing difficulty level	Easy to print

Based on use on Zortrax M200 Plus and Z-Suite 2.8.3.0. Printing may vary between printers and printheads

THESE VALUES ARE INDICATIVE AND MAY VARY

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Property, Test Condition	Standard	Unit	Values
Rheological Properties			
Melt Volume Rate 220 °C/10 kg	ISO 1133	cm ³ /10 min	5.5
Mechanical Properties			
Izod Notched Impact Strength, 23 °C	ISO 180/A	kJ/m ²	36
Izod Notched Impact Strength, -30 °C	ISO 180/A	kJ/m ²	14
Charpy Notched Impact Strength, 23° C	ISO 179	kJ/m ²	35
Charpy Notched Impact Strength, -30° C	ISO 179	kJ/m ²	13
Charpy Unnotched, 23° C	ISO 179	kJ/m ²	No Break
Charpy Unnotched, -30° C	ISO 179	kJ/m ²	140
Tensile Stress at Yield, 23° C	ISO 527	MPa	38
Tensile Strain at Yield, 23° C	ISO 527	%	2.8
Tensile Modulus	ISO 527	MPa	1900
Nominal Strain at Break, 23 °C	ISO 527	%	9
Flexural Strength	ISO 178	MPa	56
Hardness, Ball Indentation	ISO 2039-1	MPa	74
Thermal Properties			
Vicat Softening Temperature VST/B/50 (50°C/h, 50N)	ISO 306	°C	90
Vicat Softening Temperature, VST/A/50 (50°C/h, 10N)	ISO 306	°C	103

Property, Test Condition	Standard	Unit	Values
Heat Deflection Temperature A; (annealed, 1.8 MPa)	ISO 75	°C	93
Heat Deflection Temperature B; (annealed, 0.45 MPa)	ISO 75	°C	97
Coefficient of Linear Thermal Expansion	ISO 11359	10 ⁻⁶ /°C	80 - 110
Thermal Conductivity	DIN 52612-1	W/(m K)	0.17
Electrical Properties			
Dissipation Factor (100 Hz)	IEC 60250	10 ⁻⁴	54
Dissipation Factor (1 MHz)	IEC 60250	10 ⁻⁴	82
Relative Permittivity (100 Hz)	IEC 60250	-	2.9
Relative Permittivity (1 MHz)	IEC 60250	-	2.8
Volume Resistivity	IEC 60093	Ohm*m	1E13
Other Properties			
Density	ISO 1183	kg/m ³	1030
Water Absorption, Saturated at 23°C	ISO 62	%	1.03
Moisture Absorption, Equilibrium 23°C/50% RH	ISO 62	%	0.21
Yellowness Index	DIN 6167	-	15
Processing			
Linear Mold Shrinkage	ISO 294-4	%	0.4 - 0.7
Melt Temperature Range	ISO 294	°C	230 - 260
Mold Temperature Range	ISO 294	°C	30 - 80
Injection Velocity	ISO 294	mm/s	200
Drying Temperature		°C	80
Drying Time		h	2 - 4