Technical Data Sheet

Product Name: ABS

Material Identification:

Item Name	ABS
Chemical Name	Acrylonitrile-butadiene-styreneterpolymer
Application	FFF/FDM 3D Printing

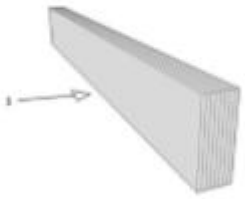
Guidelines for Print Settings:

Nozzle Temperature	220~250℃
Bed Temperature	80~100℃
Bed Modification	NO
Active Cooling Fan	OFF
Layer Height	0.2mm
Shell Thickness	≥0.8mm
Print Speed	40-80mm/s

Material Properties:

Melt Temperature	~180	ISO 11357
Glass Transition Temperature	~105℃	ISO 11357
Melt Flow Rate	30.7g/10min	ISO 1133
Heat deflection temperature (HDT)2	94.6℃	ISO 75
Vicat softening temperature(VST)3	100.9℃	ISO 306
Density	1.05g/cm3	ISO 1183
Odour	Odourless	/
Solubility	Insoluble in water	/

Mechanical Properties Tensile Test – Test Method ISO 527

MECHANICAL PROPERTIES TENSILE TEST			Test Method ISO 527	
All tests specimens were printed by Ultimaker 2+ under the following conditions: Printing temperature: 240℃ Heated bed temperature: 90℃ Print speed: 45mm/s Shell thickness: 0.8mm Infill under 45°	 Printed Vertical Z-axis		 Printed horizontal X,Y-axis	
Infill	50%	100%	50%	100%
Tensile strength (Mpa)	16.8	23.4	16.5	42.7
Force at break (Mpa)	16.8	23.4	16.5	42.7
Elongation at break (%)	3.8	4.6	6.3	9.9
Modulus (Mpa)	413	506	324	651
MECHANICAL PROPERTIES|IMPACT TEST			Test Method ISO 179	
The same conditions as tensile test. 1→impact direction	 Charpy(en)		 Charpy(ep)	
Infill	50%	100%	50%	100%
Impact strength (KJ/m²)	9.7	22.7	10.7	23.2
Notch impact strength[1] (KJ/m²)	7.6	15.5	5.5	15.0
MECHANICAL PROPERTIES |FLEXURAL TEST			Test Method ISO 178	
The same conditions as tensile test. 1→bending direction	 Normal		 parallel	
Infill	50%	100%	50%	100%
Maximum force (Mpa)	38.9	75.8	47.4	77.8
Flexural modulus (Mpa)	1333	2312	1527	2370

information or product. The user assumes all responsibility for the use of all information provided and shall verify quality and other properties or any consequence from the use of all such information. Typical values are indicative only and are not to be construed as being binding specifications.