



REPRAPPER Tech

3D Printing Filament Datasheet

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Revise Date : Oct. 24 , 2015



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Material Data Sheet: ABS

Parameter	Data	Conditions
Density	1.05g/cm ³	23°C
Melting Index	1.8	200°C 5Kg
Melting Point	200°C	
Decomposition Temperature	>260°C	
Recommended Printing Temperature	230±10°C	
Thermal Distortion Temperature	88°C	
Tension speed	6mm/min	
Impact Strength	18 Kg-cm/cm	
Ultimate elongation	20%	
Diameter Tolerance	1.75±0.03/3.0±0.05	

Material Data Sheet: PLA

Parameter	Data	Conditions
Density	1.24g/cm ³	23°C
Melting Index	-	-
Melting Point	160°C	
Decomposition Temperature	>230°C	
Recommended Printing Temperature	200±10°C	
Thermal Distortion Temperature	70°C	
Tension speed	6mm/min	
Impact Strength	-	
Ultimate elongation	145%	
Diameter Tolerance	1.75±0.03/3.0±0.05	



Document Revision: 1.0

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Material Data Sheet: Nylon

Parameter	Data	Conditions
Density	1.14	g/cm ³ , 23°C
Melting Index	98	-
Melting Point	224°C	
Decomposition Temperature	>280°C	
Recommended Printing Temperature	250±10°C	
Thermal Distortion Temperature	160°C	4.6kgf/cm
Tension speed	6mm/min	
Impact Strength	50Kg-cm/cm	
Ultimate elongation	200%	
Diameter Tolerance	1.75±0.03/3.0±0.05	

Material Data Sheet: HIPS

Parameter	Data	Conditions
Density	1.05g/cm ³	
Melting Index	5.5g/min	200°C 5Kg
Melting Point	200°C	
Decomposition Temperature	>280°C	
Recommended Printing Temperature	230±10°C	
Thermal Distortion Temperature	88°C	
Tension speed	6mm/min	
Impact Strength	11Kg-cm/cm	
Ultimate elongation	40%	
Diameter Tolerance	1.75±0.03/3.0±0.05	



Document Revision: 1.0

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Material Data Sheet: PETG

Parameter	Data	Conditions
Density	1.27	g/cm ³ , 23°C
Melting Index	-	-
Melting Point	200°C	
Decomposition Temperature	>280°C	
Recommended Printing Temperature	230±10°C	
Thermal Distortion Temperature	70°C	
Tension speed	6mm/min	
Impact Strength	100Kg-cm/cm	
Ultimate elongation	140%	
Diameter Tolerance	1.75±0.03/3.0±0.05	

Material Data Sheet: Flex

Parameter	Data	Conditions
Density	0.96	
Melting Index	-	-
Melting Point	165°C	
Decomposition Temperature	210°C~260°C	
Recommended Printing Temperature	210±10°C	
Thermal Distortion Temperature		
Tension speed	6mm/min	
Impact Strength	-	
Ultimate elongation	600%	
Diameter Tolerance	1.75±0.03/3.0±0.05	



Document Revision: 1.0

Revise Date: Oct. 24 , 2015

Material Data Sheet: Wood

Parameter	Data	Conditions
Density	1.21g/cm ³	
Melting Index		
Melting Point	200°C	
Decomposition Temperature	>270°C	
Recommended Printing Temperature	200±10°C	
Thermal Distortion Temperature	80°C	
Tension speed	6mm/min	
Impact Strength		
Ultimate elongation	40%	
Diameter Tolerance	1.75±0.03/3.0±0.05	

Material Data Sheet: PC

Parameter	Data	Conditions
Density	1.13	g/cm ³
Melting Index	6.0cm ³ /min	
Melting Point	>200°C	
Decomposition Temperature	>300°C	
Recommended Printing Temperature	250±15°C	
Thermal Distortion Temperature	142°C	
Tension speed		
Impact Strength	-	
Ultimate elongation	120%	
Diameter Tolerance	1.75±0.03/3.0±0.05	



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Revise Date: Oct. 24 , 2015

Material Data Sheet: POM

Parameter	Data	Conditions
Density	1.27	g/cm3
Melting Index	190°C/2.16 kg	12g/10 min
Melting Point	175°C	
Decomposition Temperature	>220°C	
Recommended Printing Temperature	200±10°C	
Thermal Distortion Temperature	85°C	
Tension speed		
Impact Strength		
Ultimate elongation	35%	
Diameter Tolerance	1.75±0.03/3.0±0.05	

Material Data Sheet: Copper PLA

Parameter	Data	Conditions
Density	1.43g/cm3	23°C
Melting Index	-	-
Melting Point	160°C	
Decomposition Temperature	190~240°C	
Recommended Printing Temperature	210±10°C	
Thermal Distortion Temperature	70°C	
Tension speed	6mm/min	
Impact Strength	-	
Ultimate elongation	145%	
Diameter Tolerance	1.75±0.03/3.0±0.05	
Features	*Metal appearance *Can be polished *Easy to remove supporting parts *Can build big parts without tilt issue	



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Material Data Sheet: Bronze PLA

Parameter	Data	Conditions
Density	1.39g/cm3	23°C
Melting Index	-	-
Melting Point	160°C	
Decomposition Temperature	190~240°C	
Recommended Printing Temperature	210±10°C	
Thermal Distortion Temperature	70°C	
Tension speed	6mm/min	
Impact Strength	-	
Ultimate elongation		
Diameter Tolerance	1.75±0.03/3.0±0.05	
Features	*Metal appearance *Can be polished *Easy to remove supporting parts *Can build big parts without tilt issue	

Material Data Sheet: Copper Flex

Parameter	Data	Conditions
Density	0.88	
Melting Index	-	-
Melting Point	165°C	
Decomposition Temperature	190~240°C	
Recommended Printing Temperature	215±10°C	
Thermal Distortion Temperature		
Tension speed	6mm/min	
Impact Strength	-	
Ultimate elongation	600%	
Diameter Tolerance	1.75±0.03/3.0±0.05	
Features	*Metal appearance *Flexible *Can build big parts without tilt issue *Heated bed would be better *Removing supporting parts will be easy when dipped into hot water	



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Material Data Sheet: Aluminum PLA

Parameter	Data	Conditions
Density	1.26g/cm3	23℃
Melting Index	-	-
Melting Point	160℃	
Decomposition Temperature	190~240℃	
Recommended Printing Temperature	210±10℃	
Thermal Distortion Temperature		
Tension speed	6mm/min	
Impact Strength	-	
Ultimate elongation		
Diameter Tolerance	1.75±0.03/3.0±0.05	
Features	*Metal appearance *Can be polished *Easy to remove supporting parts *Can build big parts without tilt issue	