

Zaxe ABS® Filament

Technical Data Sheet

Product Description

Zaxe ABS® filaments provide good adhesion of each layer to each other during printing with its high fluidity structure. Therefore, it shows high surface quality and low shrinkage behavior with less orientation of polymer chains. It is a good solution for applications requiring high temperature and mechanical strength.

Physical Properties	Value	Unit	Test Method
Density	1.03	g/cm ³	ISO 1183
Melt Flow Rate	5.2	g/10min	ISO 1183

Mechanical Properties	Value	Unit	Test Method
Tensile Strength	44	MPa	ASTM D638
Elastic Modulus	2100	MPa	ASTM D638
Elongation at Break	40	%	ASTM D638
Notched Izod Impact	38	KJ/m ²	ASTM D256

Thermal Properties	Value	Unit	Test Method
Heat Deflection Temperature	95	°C	ASTM D634
Glass Transition Temperature	95-105	°C	ASTM D3418

Electrical Properties	Value	Unit	Test Method
Surface Resistance	>10 ¹²	Ohm/sq	ASTM D257

The parameters of test samples printed in Vertical X,Y orientation;

0.2mm layer height

%100 infill

50mm/s printing speed

Printing Temperature: 255°C

Bed Temperature: 100°C

Note: The results in this technical data sheet are for interpretation and comparison purposes only. Values are highly dependent on printing settings, operator experience and environmental conditions. Zaxe is not responsible for any injury or loss that may occur from the use of these polymers.

Zaxe PLA® Filament

Technical Data Sheet

Product Description

Since the Zaxe PLA® filaments have a very low thermal shrinkage value, they allow printing of products with higher resolution, better mechanical and thermal properties than standard PLA filaments. Thanks to its raised crystal structure, it can be printed faster than other filaments.

Physical Properties	Value	Unit	Test Method
Density	1.23	g/cm ³	ISO 1183
Melt Flow Rate	17.3	g/10min	ISO 1183

Mechanical Properties	Value	Unit	Test Method
Tensile Strength	56	MPa	ASTM 527
Elastic Modulus	2850	MPa	ASTM 527
Elongation at Break	7	%	ASTM 527
Notched Izod Impact	14.2	KJ/m ²	ASTM 179

Thermal Properties	Value	Unit	Test Method
Heat Deflection Temperature	55	°C	ASTM D648
Glass Transition Temperature	55-60	°C	ASTM D3418

Electrical Properties	Value	Unit	Test Method
Surface Resistance	>10 ¹²	Ohm/sq	ASTM D257

The parameters of test samples printed in Vertical X,Y orientation;

0.2mm layer height

%100 infill

50mm/s printing speed

Printing Temperature: 210°C

Bed Temperature: 60°C

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Zaxe PETG® Filament

Technical Data Sheet

Product Description

Zaxe PETG® filaments; It is a versatile filament with high temperature resistance, excellent chemical resistance and impact strength. Thanks to its properties, it can be used industrially in the production of end products. Its unique properties such as high abrasion resistance, high chemical resistance and low gas permeability are the reasons for its preference.

Physical Properties	Value	Unit	Test Method
Density	1.28	g/cm ³	ISO 1183
Melt Flow Rate	20	g/10min	ISO 1183

Mechanical Properties	Value	Unit	Test Method
Tensile Strength	53	MPa	ASTM 527
Elastic Modulus	3000	MPa	ASTM 527
Elongation at Break	30	%	ASTM 527
Notched Izod Impact	14.2	KJ/m ²	ASTM 179

Thermal Properties	Value	Unit	Test Method
Heat Deflection Temperature	80	°C	ASTM D648
Glass Transition Temperature	80-85	°C	ASTM D3418

Electrical Properties	Value	Unit	Test Method
Surface Resistance	>10 ¹²	Ohm/sq	ASTM D257

The parameters of test samples printed in Vertical X,Y orientation;

0.2mm layer height

%100 infill

50mm/s printing speed

Printing Temperature: 240°C

Bed Temperature: 70°C

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Zaxe PC/ABS® Filament

Technical Data Sheet

Product Description

Zaxe PC/ABS® filaments have a high performance formulation. Thanks to this structure, it is a perfect solution for industrial applications with its high temperature and mechanical resistance. Its semi-matt appearance hides layer lines and allows the production of products with high surface quality and low gas permeability are the reasons for its preference.

Physical Properties	Value	Unit	Test Method
Density	1.13	g/cm ³	ISO 1183
Melt Flow Rate	12	g/10min	ISO 1133

Mechanical Properties	Value	Unit	Test Method
Tensile Strength	60	MPa	ISO 527
Elastic Modulus	2200	MPa	ISO 527
Elongation at Break	75	%	ISO 527
Notched Izod Impact	13	KJ/m ²	ISO 179

Thermal Properties	Value	Unit	Test Method
Heat Deflection Temperature	120	°C	ASTM D648
Glass Transition Temperature	125-135	°C	ISO 75

Electrical Properties	Value	Unit	Test Method
Surface Resistance	>10 ¹²	Ohm/sq	ASTM D257

The parameters of test samples printed in Vertical X,Y orientation;

0.2mm layer height

%100 infill

50mm/s printing speed

Printing Temperature: 280°C

Bed Temperature: 110°C

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Zaxxe PC/AABS® Filamente

Technical Data Sheet

Zaxe ASA[®] Filament

Technical Data Sheet

Product Description

Zaxe ASA[®] filaments is an ideal choice for outdoor applications thanks to its UV stability. It maintains its toughness and strength for a long time even under load in outdoor applications. Even if it is exposed to the sun, its surface does not turn yellow. Printing supports can be easily separated, easily sanded and detailed prints can be obtained without shrinking problems.

Physical Properties	Value	Unit	Test Method
Density	1.06	g/cm ³	ASTM D792
Melt Flow Rate	22	g/10min	ASTM D1238

Mechanical Properties	Value	Unit	Test Method
Tensile Strength	48	MPa	ASTM D638
Elastic Modulus	2100	MPa	ASTM D638
Elongation at Break	12	%	ASTM D638
Notched Izod Impact	17	KJ/m ²	ISO 179

Thermal Properties	Value	Unit	Test Method
Heat Deflection Temperature	95	°C	ASTM D648
Glass Transition Temperature	100-105	°C	ASTM D3418

Electrical Properties	Value	Unit	Test Method
Surface Resistance	>10 ¹²	Ohm/sq	ASTM D257

The parameters of test samples printed in Vertical X,Y orientation;

0.2mm layer height

%100 infill

50mm/s printing speed

Printing Temperature: 260°C

Bed Temperature: 110°C

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