



Kimya ABS-S 3D Filament

The 3D filament Kimya **ABS-S** belongs to the styrenic polymer family. Acrylonitrile butadiene styrene (**ABS**) is a thermoplastic polymer offering high impact resistance and is relatively rigid and lightweight. Due to its excellent surface appearance and decorative qualities (it can be easily colored), ABS is widely used in outer casing applications in sectors such as domestic appliances, telephony, IT equipment and toys.

- Impact resistance
- Higher heat resistance than PLA (around 90°C)
- A filament that can be used in all 3D printers on the market
- Large formats from 5kg to 10kg and different colors available on request
- Food contact certified under **EU 10/2011** and **FDA 21 CFR** (white only)
- Complies with the **RoHS** and **REACH** standards

2-year KIMYA warranty.

FILAMENT PROPERTIES

PROPERTIES	TEST METHODS	VALUES
Diameter	INS-6712	1.75 ± 0.1 mm 2.85 ± 0.1 mm
Density	ISO 1183-1	1.035 g/cm ³
Moisture rate	INS-6711	< 0.5 %
Melt flow index (MFI)	ISO 1133-1 (@220°C – 10 kg)	3.5 - 6 g/10min
Glass transition temperature (T_g)	ISO 11357-1 DSC (10°C/min - 20-300°C)	107 °C

PRINT PARAMETERS AND SPECIMENS DIMENSIONS

PRINTING DIRECTION	XY
Printing Speed	20-50 mm/s
Infill	100% - rectilinear
Infill Angle	45°/-45°
Nozzle Temperature	260°C
Bed T°	85-95°C

PRINTED SPECIMENS PROPERTIES

	PROPERTIES	TEST METHODS	VALUES
MECHANICAL PROPERTIES	Tensile modulus	ISO 527-2/5A/50	1,484 MPa
	Tensile Strength	ISO 527-2/5A/50	35.3 MPa
	Tensile strain at strength	ISO 527-2/5A/50	2.7 %
	Tensile Stress at Break	ISO 527-2/5A/50	22.8 MPa
	Tensile strain at break (type A)	ISO 527-2/5A/50	9.8 %
	Flexural modulus	ISO 178	1,443 MPa
	Deformation at Flexural Strain	ISO 178	>5 %
	Flexural stress at conventional deflection (3,5% strain)*	ISO 178	43.6 MPa
	Charpy impact resistance	ISO 179-1/1eA	24.7 kJ/m ²
	Shore Hardness	ISO 868	70D
Note 1	*According to ISO 178, end of the test at 5% deformation even if there is no specimen break.		
Note 2	The data should be considered as indicative values - Properties can be influenced by production conditions.		

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