Kimya ABS-R

Kimya ABS-R 3D filament is a standard ABS based on 100% post-consumer recycled material from a recycling company based in France. Its use contributes to the development of a circular economy by reducing the emission of C02, the consumption of water and electricity as well as the oil resources necessary for its production. Acrylonitrile butadiene styrene (ABS) is a thermoplastic polymer combining lightness, high impact resistance and good temperature resistance. ABS is suitable for functional prototyping, enclosure applications in industries such as appliances, telephony, automotive, hardware and toys.

- Better heat resistance than PLA (around 90°C)
- Good impact resistance
- Made from 100% post-consumer recycled ABS – reduced environmental impact
- Compliant with REACH regulation and RoHS directive

2-year KIMYA warranty.
Store away from light, humidity and heat to maintain the properties of the product

FILAMENT PROPERTIES

PROPERTIES	TEST METHODS	VALUES
Diameter	INS-6712	1.75 ± 0.1 mm 2.85 ± 0.1 mm
Density	ISO 1183-1	1.049 g/cm3
Moisture rate	INS-6711	< 0.5 %
Melt flow index (MFI)	ISO 1133-1 (@220°C – 10 kg)	14.2 g/10min
Glass transition temperature (Tg)	ISO 11357-1 DSC (10°C/min - 20-220°C)	110 °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	1,722 MPa
	Tensile Strength	ISO 527-2/5A/50	32.2 MPa
	Tensile strain at strength	ISO 527-2/5A/50	2.1 %
	Tensile Stress at Break	ISO 527-2/5A/50	27.5 MPa
	Tensile strain at break (type A)	ISO 527-2/5A/50	9.4 %
	Flexural modulus	ISO 178	1,557 MPa
	Flexural stress at conventional deflection (3,5% strain)*	ISO 178	48.4 MPa
	Charpy impact resistance	ISO 179-1/1eA	8.5 kJ/m²
	Shore Hardness	ISO 868	72.2D

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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