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Fiche Technique

KIMYA ABS-R 3D FILAMENT

Low-cost filament for FFF 3D Printers

DESCRIPTION

Kimya ABS-R is a 3D printing filament made from 100% post-consumer recycled ABS (Acrylonitrile Butadiene Styrene). As a thermoplastic polymer, ABS offers a combination of lightness, impact resistance, and good temperature performance. By using recycled material, ABS-R supports the circular economy and helps reduce CO_2 emissions, water and energy consumption, and reliance on fossil resources. It's well-suited for functional prototypes and enclosures in sectors such as appliances, automotive, hardware, and toys - offering both performance and sustainability.

BENEFITS

- Durable.
- Heat-Resistant.
- Ready to Versatile Industrial Use.

TECHNICAL DATA

Properties	Values	Test Methods
Diameter	1.75 ± 0.1 mm 2.85 ± 0.1 mm	INS-6712
Density	1.049 g/cm^3	ISO 1183-1
Moisture rate	< 0.5 %	INS-6711
Melt flow index (MFI)	14.2 g/10min	ISO 1133-1 (@220°C-10kg)
Glass transition temperature (Tg)	110°C (230°F)	ISO 11357-1 DSC (10°C/min-20-220°C)
Properties	**Values**	**Test Methods**
Tensile Modulus	1,722 MPa (250 ksi)	ISO 527-2/5A/50
Tensile Strength	32.2 MPa (4.7 ksi)	ISO 527-2/5A/50
Tensile Strain at Strength	2.1 %	ISO 527-2/5A/50
Tensile Stress at Break	27.5 MPa (4.0 ksi)	ISO 527-2/5A/50
Tensile Strain at Break (type A)	9.4 %	ISO 527-2/5A/50
Flexural Modulus	1,577 MPa (255.8 ksi)	ISO 178
Flexural Stress at Conventional Deflection (3.5% Strain)*	48.4 MPa (7.0 ksi)	ISO 178
Charpy Impact Resistance	8.5 kJ/m^2 (4.04 ft-lbs/in^2)	ISO 179-1/1eA
Shore Hardness	72.2 D	ISO 868

PROCESSING

Printing Direction	XY
Printing Speed	Initial layers: 10-15 mm/s, further layers 10-50 mm/s
Nozzle Temperature	255°C - 270°C (491°F - 518°F)
Bed Temperature	85°C - 95°C (185°F - 203°F)

NOTES

- *According to ISO 178, end of the test at 5% deformation even if there is no specimen break.
- The data should be considered as indicative values - Properties can be influenced by production conditions.

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