AIRTECH EUROPE SARL
18, ZI Haneboesch
L-4562 Differdange
LUXEMBOURG
Phone: +352 58 22 82 1
Fax: + 352 58 49 35
E-mail: sales@airtech.lu
Website: www.airtech.lu

Fiche Technique

KIMYA ABS-ESD 3D FILAMENT

ESD ABS additive manufacturing filament

DESCRIPTION

Kimya ABS-ESD is a 3D printing filament made from ABS (Acrylonitrile Butadiene Styrene) with added ESD (Electrostatic Discharge) protection. As part of the styrenic polymer family, it combines the mechanical strength and rigidity of standard ABS with the ability to safely dissipate static electricity. This makes it particularly useful for sensitive electronic applications. Kimya ABS-ESD is lightweight, impact-resistant, and easy to print, offering a reliable solution for functional parts where electrostatic protection is essential.

BENEFITS

- ESD Protection.
- Strong Yet Lightweight.
- Impact Resistant.

TECHNICAL DATA

Properties	Values	Test Methods
Diameter	1.75 ± 0.1 mm 2.85 ± 0.1 mm	INS-6712
Density	1.064 g/cm^3	ISO 1183-1
Moisture rate	< 0.5 %	INS-6711
Melt flow index (MFI)	16 - 24 g/10min	ISO 1133-1 (@200°C-10kg)
Glass transition temperature (Tg)	107°C (225°F)	ISO 11357-1 DSC (10°C/min-20-220°C)
Properties	**Values**	**Test Methods**
Surface resistivity	1×10^7 - 1×10^{10} Ω/sq	ASTM D257
Tensile Modulus	1,207 MPa (175 ksi)	ISO 527-2/5A/50
Tensile Strength	27 MPa (3.9 ksi)	ISO 527-2/5A/50
Tensile Strain at Strength	2.9 %	ISO 527-2/5A/50
Tensile Stress at Break	18 MPa (2.6 ksi)	ISO 527-2/5A/50
Tensile Strain at Break (type A)	5.7 %	ISO 527
Flexural Modulus	957 MPa (141.7 ksi)	ISO 178
Deformation at Flexural Strain	> 5 %	ISO 178
Flexural Stress at Conventional Deflection (3.5% Strain)*	33.8 MPa (4.90 ksi)	ISO 178
Charpy Impact Resistance	13.3 kJ/m^2 (6.32 ft-lbs/in^2)	ISO 179-1/1eA
Shore Hardness	64.1 D	ISO 868

PROCESSING

Printing Direction	XY
Printing Speed	Initial layers: 10-20 mm/s, further layers 25-50 mm/s
Nozzle Temperature	255°C - 270°C (491°F - 518°F)
Bed Temperature	90°C - 100°C (194°F - 212°F)

SUSTAINABILITY

Can be recycled

Recyclable packaging

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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