

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

Diameter	1.75 ± 0.1 mm 2.85 ± 0.1 mm
Density	1.064 g/cm ³
Moisture rate	< 0.5 %
Melt flow index (MFI)	16 - 24 g/10min
Glass transition temperature (Tg)	107°C (225°F)

Values

1.75 ± 0.1 mm 2.85 ± 0.1 mm
1.064 g/cm ³
< 0.5 %
16 - 24 g/10min
107°C (225°F)

Test Methods

INS-6712
ISO 1183-1
INS-6711
ISO 1133-1 (@200°C-10kg)
ISO 11357-1 DSC (10°C/min-20-220°C)

Properties

Surface resistivity	1 × 10 ⁷ - 1 × 10 ¹⁰ Ω/sq
Tensile Modulus	1,207 MPa (175 ksi)
Tensile Strength	27 MPa (3.9 ksi)
Tensile Strain at Strength	2.9 %
Tensile Stress at Break	18 MPa (2.6 ksi)
Tensile Strain at Break (type A)	5.7 %
Flexural Modulus	957 MPa (141.7 ksi)
Deformation at Flexural Strain	> 5 %
Flexural Stress at Conventional Deflection (3.5% Strain)*	33.8 MPa (4.90 ksi)
Charpy Impact Resistance	13.3 kJ/m ² (6.32 ft-lbs/in ²)
Shore Hardness	64.1 D

Values

1 × 10 ⁷ - 1 × 10 ¹⁰ Ω/sq
1,207 MPa (175 ksi)
27 MPa (3.9 ksi)
2.9 %
18 MPa (2.6 ksi)
5.7 %
957 MPa (141.7 ksi)
> 5 %
33.8 MPa (4.90 ksi)
13.3 kJ/m ² (6.32 ft-lbs/in ²)
64.1 D

Test Methods

ASTM D257
ISO 527-2/5A/50
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ISO 527-2/5A/50
ISO 527
ISO 178
ISO 178
ISO 178
ISO 179-1/1eA
ISO 868

PROCESSING

Printing Direction

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)

XY

Initial layers: 10-20 mm/s, further layers 25-50 mm/s
255°C - 270°C (491°F - 518°F)
90°C - 100°C (194°F - 212°F)

SUSTAINABILITY

Can be
recycledRecyclable
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.