Kimya ABS-ESD 3D Filament

The Kimya **ABS-ESD** 3D filament belongs to the styrenic polymer family. **ABS-ESD** is an Acrylonitrile Butadiene Styrene to which an additive has been added to give it Electro Static Discharge properties: this material protects against electrostatic discharge. It also provides good impact resistance. It is a lightweight and rigid material that is also easy to print. It is ideal for applications requiring protection against electrostatic discharge. The Kimya ABS-ESD 3D filament has the following properties:

- Easy to print
- Protects against electrical discharge
- 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	1.03 g/cm3
Moisture rate	INS-6711	< 0.5 %
Melt flow index (MFI)	ISO 1133-1 (@220°C – 10 kg)	15 - 20 g/10min
Glass transition temperature (Tg)	ISO 11357-1 DSC (10°C/min - 20-220°C)	107 °C

PRINT PARAMETERS AND SPECIMENS DIMENSIONS

PRINTING DIRECTION	XY
Printing Speed	40 mm/s
Infill	100% - rectilinear
Infill Angle	45°/-45°
Nozzle Temperature	260°C
Bed T°	100°C

PRINTED SPECIMENS PROPERTIES

	PROPERTIES	TEST METHODS	VALUES
ELECTRICAL PROPERTIES	Surface resistivity	ASTM D257	10^7 - 10^9 Ohms/m²
MECHANICAL PROPERTIES	Tensile modulus	ISO 527-2/5A/50	1,121 MPa
	Tensile Strength	ISO 527-2/5A/50	24.3 MPa
	Tensile strain at strength	ISO 527-2/5A/50	3.1 %
	Tensile Stress at Break	ISO 527-2/5A/50	19.8 MPa
	Tensile strain at break (type A)	ISO 527	6.4 %
	Flexural modulus	ISO 178	856 MPa
	Deformation at Flexural Strain	ISO 178	>5 %
	Flexural stress at conventional deflection (3,5% strain)*	ISO 178	27.3 MPa
	Charpy impact resistance	ISO 179-1/1eA	10.9 kJ/m²
	Shore Hardness	ISO 868	66,7D

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.

Created on 10/09/2018 - Revised on 16/06/2022.

KIMYA SAS - 20 RUE CHEVREUL
44105 NANTES – FRANCE
TEL. : 02 40 38 40 00 – EMAIL : kimya@armor-group.com
www.armor-group.com/kimya