ESD V1 Resin Technical Data Sheet

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High-performance ESD resin, providing cost-effective solutions for industrial ESD-safe application scenarios.

ESD resin is a high-performance 3D printing material specifically designed for applications that require static-dissipative parts to repel dust and powder, to prevent sparks and explosions , and to protect sensitive electronics from static discharge. This material possesses not only outstanding mechanical properties (rigid and strong thermoplastic, e.g. PET and POM) , but also shows a stable anti-static property (10^5 – 10^8 Ohms/sq), which can effectively reduce the accumulation and release of static electricity, avoiding the electrostatic impact for industrial applications. This material can be widely used in fields such as electronics and aerospace, etc.

Benefits:

- Stable ESD property (10^5 – 10^8 Ohms/sq)
- Superior mechanical property (E-modulus: 3.0 GPa, UTS: 68 MPa)
- High resolution and surface quality

Applications：

- Jigs&fixtures for electronics and automotive manufacturing
- Electronic housings, storage trays, electronic prototypes and parts
- Sensor mounting brackets, electrical connector housings, etc.

Physical Properties

Property	Testing Method	Typical Value	
		Metric	Imperial
Appearance	/	Liquid、Black	
Liquid Density	ASTM D792	1.15g/cm^3	
Solid Density	ASTM D792	1.25g/cm^3	
Viscosity at 25 ℃	ASTM D7867	1267 cps@25°C	1267 cps@77°F
Shore D Hardness	ASTM D2240	85 D(Post-Cured)	

Mechanical Properties*

Property	Testing Method	Green		Post-Cured	
		Metric	Imperial	Metric	Imperial
E- Modulus	ASTM D638	1.9 GPa	273.9ksi	3.0 GPa	439.3 ksi
Tensile Strength	ASTM D638	41 MPa	5946.5 psi	68 MPa	9862.6 psi
Elongation at Break	ASTM D638	13 %	13 %	6 %	6 %
Flexural Modulus	ASTM D790	1.7 GPa	249.6 ksi	3.0 GPa	434.8 ksi
Flexural Strength	ASTM D790	43 MPa	6236.6 psi	126 MPa	18.3 ksi
Notched Izod	ASTM D256	23.0 J/m	5.2 ft-lbf/in	28.0 J/m	6.3 ft-lbf/in

***Note:**

1. All test samples are printed on Raise3D DF2 printer (405nm wavelength, 2.3mW/cm^2,100 μm layer thickness, exposure time 7 seconds);
2. All post-cured test samples are cured at room temperature for 10 minutes on the front and back of the sample with DF Cure;
3. All test samples are placed under laboratory environmental conditions of 20-25 ℃ / 40-60% relative humidity for 16-24 hours;
4. Test performance varies with part geometry, print location orientation, print settings, and temperature.

Thermal Properties*

Property	Testing Method	Green		Post-Cured	
		Metric	Imperial	Metric	Imperial
Heat Deflection Temp @0.45 MPa/66 psi	ASTM D648	/	/	76℃	168.8℉
Heat Deflection Temp @1.82 MPa/264 psi	ASTM D648	/	/	53℃	127.4℉

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4. Test performance varies with part geometry, print location orientation, print settings, and temperature.

Disclaimer

The typical values presented in this data sheet are intended for reference and comparison purposes only. They should not be used for design specifications or quality control purposes. Actual values may vary significantly with printing conditions. End-use performance of printed parts depends not only on materials, but also on part design, environmental conditions, printing conditions, etc. Product specifications are subject to change without notice.

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