



ESD ABS 3D Filament

AON3D Readyprint™ ESD ABS is an Acrylonitrile Butadiene Styrene (ABS) composite with carbon black to provide electrostatic discharge (ESD) on 3D printed parts. ESD ABS provides similar mechanical properties to baseline ABS with good impact resistance, low density, and printability. This composite polymer is typically used for parts that interface with electronic components such as housing for circuit boards or jigs and fixtures for electronics. The AON3D ESD ABS 3D filament has the following properties:

- Easy to print
- Protects against electrical discharge
- Complies with the RoHS and REACH standards

2-year AON3D 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/cm ³ |
| Moisture Rate | INS-6711 | < 0.5 % |
| Melt Flow Index (MFI) | ISO 1133-1 (@220°C – 10 kg) | 15–20 g/10min |
| Glass Transition Temperature (T _g) | ISO 11357-1 DSC (10°C/min – 20–220°C) | 107 °C |

Print Parameters & 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 |
|---|-----------------|-------------------------------|
| Surface Resistivity | ASTM D257 | 107 – 109 Ohms/m ² |
| Tensile Modulus | ISO 527-2/5A/50 | 1,121 MPa |
| Tensile Strength | ISO 527-2/5A/50 | 24.3 MPa |
| Tensile Strain at Yield | 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/m ² |
| Shore Hardness | ISO 868 | 66.7D |

*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.