

FR-106

FR-106 is a polyamide blend specifically engineered for the production of parts exhibiting excellent fire retardancy without compromising mechanical properties.

Parts manufactured using FR-106 maintain superior toughness and impact resistance. FR-106 parts can be manufactured to very low thickness, as low as 0.030 inches, without compromising fire retardant properties. Even at very low thickness, FR-106 has been shown to easily pass 60 second vertical burn testing while also passing smoke and toxicity testing.

Every batch of FR-106 material is manufactured under high quality control standards. Detailed quality control test results are provided with each shipment of FR-106 material to certify conformance for the more rigorous production specifications typically encountered in rapid manufacturing applications.

Powder Properties		
Density, Bulk	ASTM D1895A	0.50 g/cc
<u>Particle Size</u>		
- d90	Laser Diffraction	95 µm
- d50	Laser Diffraction	45 µm
- d10	Laser Diffraction	151 µm
Melting Point	ASTM D3418	186 °C
Melt Flow Rate	ASTM D 1238	9.6 g /10 mins
Powder Properties		
Specific Gravity	ASTM D792	1.07 g/cc
<u>Tensile Strength, Ultimate</u>		
- XY orientation	ASTM D638	46 MPa / 6700psi
- Z orientation	ASTM D638	39 MPa / 5600 psi
<u>Tensile Strength, Yield</u>		
- XY orientation	ASTM D638	26 MPa / 3700psi
- Z orientation	ASTM D638	21 MPa / 3100 psi
Modulus of elasticity	ASTM D638	1345 MPa / 195 kpsi
<u>Elongation at break</u>		
- XY orientation	ASTM D638	38 %
- Z orientation	ASTM D638	21 %
<u>Flammability</u>		
- 12 second burn	FAR 25.853	PASS
- 60 second burn	FAR 25.853	PASS
Smoke Density	FAR 25.853	PASS

** The mechanical properties depend on the exposure parameters used. The data are based on our latest knowledge and are subject to changes without notice. They do not guarantee properties for a particular part and in a particular application.*