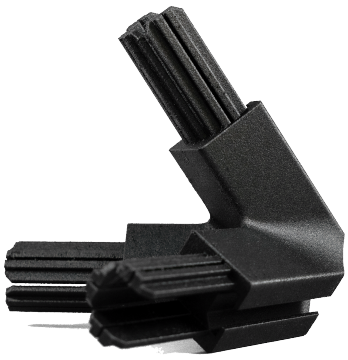
Mosaic Matrix (CF Nylon)

Technical Data Sheet

Compatible with Element, Element HT & Array



Description

Matrix is a proprietary blend of carbon fiber nylon that is optimized for printing on Element. This material has a high strength-to-weight ratio and excellent wear resistance. The addition of carbon fiber makes layer lines almost indistinguishable, yielding parts with high aesthetic quality.

Key Features

- ✓ Stiff
- ✓ Strong
- ✓ High thermal resistance
- ✓ High strength-to-weight ratio
- ✓ Excellent surface quality

Sample Applications

- ✓ Aerospace components
- ✓ Structural parts
- ✓ Automotive parts
- ✓ Protective casings
- ✓ Robotic components

Available Colours

Black

Filament Specifications

Diameter	Tolerance
1.75 mm	+/- 0.05 mm

Version 4.0 - June 2023

Printing Guidelines

Slicer Profile	Coming soon to canvas3d.io
Nozzle Temperature	280°C
Heated Chamber	Recommended
Build Surface	Element Bed Type I with glue stick
Special Considerations	N/A

Storage/Handling Considerations

Hygroscopicity	High
Drying Temperature	100°C
Drying Time	8 Hours

Note: When not in use, spool should be stored in a Mosaic Material Pod or inside a vacuum sealed container.

Material Properties

Property	Standard	Typical Value
Density	ISO 1183	1.03 g/cc
Tensile Strength, Break	ISO 527	80.43 MPa
Tensile Modulus	ISO 527	4634 MPa
Elongation at Break	ISO 527	7.01%
Heat Deflection Temp.	ISO 75 1.8MPa	101.6°C

Multi-Material Compatibility

Automation

Same-material Automated Changeover	With Material Pod

Supports

Same-material support	Yes
Compatible Soluble Materials	Dissolve LT (Water-soluble)
Compatible Breakaway Materials	None

Note: Matrix has a high tendency to absorb moisture so if it is used with soluble support and dissolved in water, it is recommended to dry the part for at least 8 hours at 100C afterwards to maintain desired properties. Submerging Matrix in water may result in a deformed part.