



PRECISION CHOPPED CARBON FIBERS

Standard products of precision chopped carbon fibers are available in a variety of chop lengths and oversized surface finishes. The tables below indicate the range of standard products. Special requirements are available upon request. Toll services are also provided for customer supplied materials (fiber and/or specialty sizing).

Thermoplastic sizing:

Typical Applications:

PU (Polyurethane) based sizing for a wide range of compounding applications. Compatible with PA, PET, PBT resins

PA (Polyamide) based sizing compatible with PA, PET, PBT, PPS, ETP resins with higher temperature processing needs

PC (Polycarbonate) phenoxy based sizing for polycarbonate based resins

| Code | Chop Length | Sizing | Sizing Level |
|-------|-------------|--------|--------------|
| A0303 | 3 mm | PU | 2.7% |
| A0603 | 6 mm | | |
| A0306 | 3 mm | PA | 3.5% |
| A0606 | 6 mm | | |
| A0307 | 3 mm | PC | 3.5% |
| A0607 | 6 mm | | |

High temperature thermoplastic sizing:

Typical Applications:

Polyimide based sizing for compatibility with compounding in higher temperature polymers (PEEK, PEI, PPS)

| Code | Chop Length | Sizing | Sizing Level |
|-------|-------------|--------|--------------|
| A0305 | 3 mm | PEEK | 3.0% |
| A0605 | 6 mm | | |

Epoxy compatible sizing (no oversize):

Typical Applications:

Standard modulus carbon with no additional oversizing.

Good for forged carbon products, sheet molding compounds, concrete repair and strengthening

| Code | Chop Length | Sizing | Sizing Level |
|-------|-------------|--------|--------------|
| A0300 | 3 mm | EP | 1.0% |
| A0600 | 6 mm | | |
| A0900 | 9 mm | | |
| A1200 | 12 mm | | |
| A2500 | 25 mm | | |
| A5000 | 50 mm | | |



Nickel Coated Carbon Fiber with oversizing:

Typical Applications:

Nickel coated carbon fibers are used for increasing the electrical conductivity for higher conductivity needs or EMI/RF shielding. The Ni weight percent may be specified between 20-40% based upon the application need.

Water dispersible processes may use PVA sizing.

Compounding processes use PU, PA, or PEEK depending on the compatibility requirements.

Other options available upon request

| Code | Chop Length | Sizing | Sizing Level |
|----------------|---------------|--------|--------------|
| B0302 B1202 | 6 mm 12 mm | PVA | 3.8% |
| B0303 B0603 | 3 mm 6 mm | PU | 2.7% |
| B0305 B0605 | 3 mm 6 mm | PEEK | 3.0% |
| B0306 B0606 | 3 mm 6 mm | PA | 3.5% |

Ultra Precision Short Chopped:

Typical Applications:

Ultra precision short chopped fibers are used for improving electrical and/or thermal conductivity. The precision chopped fibers provide a longer fiber compared to milled fibers.

No additional over sizing is applied to these fibers. Processed from standard modulus carbon fibers.

Any fiber length may be specified between 0.3 and 2 mm

| Code | Chop Length | Sizing | Sizing Level |
|--------------------------------------|--------------------------------------|--------|--------------|
| PCF005 PCF010 PCF015 PCF020 | 0.5 mm 1.0 mm 1.5 mm 2.0 mm | EP | 1.0% |

Packaging Options:

All oversized products:

- Polyethylene bagged in 25 lb boxes
- Polyethylene bagged in either 40 lb or 50 lb boxes
- Polyethylene lined Gaylords - 1,000 lbs

All products with no oversizing:

- Polyethylene bagged in 25 lb boxes
- Individually bagged in polyethylene bags of 25 lbs and stacked in Gaylords
 - 900 lbs for 3 mm products
 - 1,200 lbs for all others
- Precision chopped short fibers varies based on order