

Converting Post Industrial Carbon Fiber to New Product

CFR PAN Carbon Fiber, *Pre-Ox*
(Carbon Content: 62%)

Technical Data Sheet 1/2

PAN Carbon Fiber is precision cut to customer requested lengths from 0.125" to 6" including 1-2", 2-3", and 2-12" blends.

INTRODUCTION

CFR PAN fiber is a precision cut fire retardant textile fiber with effective heat blocking and fire barrier applications. Ideal for processing into nonwoven fabrics and felts, CFR PAN does not burn, melt or drip, instead the fibers char and self and self extinguish. CFR PAN is also ideal for processing into friction products such as high performance brakes and clutches.

KEY BENEFITS

CFR PAN fiber is characterized by:

- Superior flame resistance
- Competitive pricing
- Large supply, ready to ship

Nonwovens produced using CFR PAN fiber are characterized by:

- Excellent dispersion in wet lay
- Very good electrical, thermal and acoustic insulating
- Very good chemical resistance
- Properties exceeding Polyester and Aramid
- Excellent flexibility

SUGGESTED APPLICATIONS

CFR PAN fiber is recommended for use in:

- Fireblocker fabrics for Aircraft seats, insulation
- Flame resistant mattresses and furniture
- Welding blankets
- Nonwovens for insulation of bonnet and transmission tunnels
- Nonwovens used in building components
- Protective apparel
- Preforms and SMC for car body components
- Ceramic brakes and clutches

TYPICAL VALUES

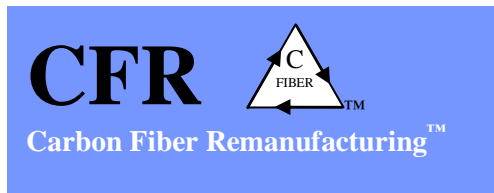
Electrical Resistivity: 8×10^8 (ohms cm)
Fiber Diameter: 0.512 mil
LOI: > 49%
Carbon content: 62%

PHYSICAL PROPERTIES

Density: 1.37 g/cc
Denier: 1.20
Tensile strength: >210 Mpa (270-330 typical)
Elongation: 20-32%
Modulus: GPa 3.3-4.9

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FIBER ORIGIN PROCESS

CFR PAN fiber is a polyacrylonitrile (PAN) precursor fiber which originates as a high performance aerospace grade fiber. The CFR reclamation process recovers these fibers in a controlled and certified process to maintain fiber quality and eliminate scrap to landfill. CFR PAN fiber does not undergo any additional chemical or thermal processing during the reclamation procedure, thus maintain virgin material properties. CFR PAN fibers are a certified 'green' recycled product which support qualification of end-products utilizing this raw material source.

STORAGE AND HANDLING

Fiber is delivered in sealed packaging. It is recommended to maintain sealed packaging and store in a dry place. Care should be taken to avoid inhalation of fiber during processing and handling if fiber becomes airborne.

PRECAUTIONS

This product does not contain any components regulated under applicable section of the EPA. Consult the relevant Safety Data Sheet for appropriate handling procedures, protective equipment, and disposal prior to using this or any other material referred to in this bulletin.

See Safety Data Sheet for emergency and first aid procedure.

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