



Converting Post Industrial Carbon Fiber to New Product

**CFR PAN -010, -022, -034
Thermal Barrier, PAN Carbon Fiber, Nonwoven Sheets**

INTRODUCTION

CFR PAN is a nonwoven fire retardant carbon fiber sheet with effective heat blocking and fire barrier applications. CFR PAN does not burn, melt or drip, instead the fibers char and self extinguish. CFR PAN is electrically nonconductive and functions as an effective electrical insulator, even after exposure to heat and open flames. This inherently fire resistant sheet has the ability to meet the increasing demands for thermal insulations, while minimizing added weight. CFR PAN nonwovens are available at specified roll widths and are easily converted to composite laminates when applicable.

KEY BENEFITS

CFR PAN is characterized by:

- Superior flame resistance
- Competitive price
- Large supply

CFR PAN Nonwovens are characterized by:

- Excellent sheet uniformity
- Excellent flexibility
- Very good electrical, thermal and acoustic insulating
- Very good chemical resistance
- Properties exceeding Glass, Polyester, and Aramid alternatives

SUGGESTED APPLICATIONS

CFR PAN is recommended for use in:

- Fireblocker fabrics and laminates for Aircraft interiors
- Flame resistant mattresses and furniture
- Preforms and SMC for car body components
- Nonwovens used in buildings
- Nonwovens for insulation of bonnet and transmission tunnels
- Carbon brakes and clutches
- Welding blankets

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AVAILABLE SHEET RANGES***CFR PAN 010**

Thickness: 9 (mils)
Grammage: 10 (g/m²)

CFR PAN 022

Thickness: 20 (mils)
Grammage: 22 (g/m²)

CFR PAN 034

Thickness: 30 (mils)
Grammage: 34 (g/m²)

*Ranges listed are typical, alternatives available upon request.

PHYSICAL PROPERTIES

Carbon Fiber Density: 1.37 g/cc
Electrical Resistivity: 8x10⁸ (ohms cm)
LOI: >40%

NONWOVEN FORMATION PROCESS

CFR PAN begins as a chopped PAN carbon fiber (CFR Cut PAN), which is converted through a wet-lay process to create a uniform nonwoven sheet. When applicable the nonwoven roll is converted to specified widths or tapes. Sheet thickness and grammage are customized per specifications or can be ordered by our standard grades. CFR PAN is available at our discounted price by utilizing a recycle fiber consistent in quality and properties with those of an equivalent virgin fiber. For more information on fiber origin please reference the CFR Cut PAN technical data sheet.

STORAGE AND HANDLING

Our Nonwoven is delivered on a roll 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.

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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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