Carbon Fiber Remanufacturing ™

Guide

to

Reclaimed Carbon Fiber

&

Market Applications

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CFR

Carbon Fiber Remanufacturing LLC
www.carbonfiberremanufacturing.com

Corporate Information

Welcome to CFR
Global leader in Carbon Fiber Remanufacturing

Carbon Fiber Remanufacturing (CFR) develops alternatives to land filling of post industrial excess and scrap carbon fiber materials for various industries utilizing carbon fiber. The industry estimates that 30% of carbon fibers become excess or part of the waste stream in the manufacturing process. CFR recovers millions of pounds annually for designed, engineered applications to a wide range of new product.

CFR processes carbon fiber scrap, end cuts and preform by detangling, milling, cutting and preparing the materials for use in certain product applications developed by CFR with its manufacturing clients. Critical to CFR's ability to manage the waste streams is the ongoing development of secondary uses and markets for reclaimed carbon fibers.

Carbon Fiber Remanufacturing LLC, established in 2011 as an outgrowth of our 20 years of work developing efficient and desirable solutions to a wide range of excess and problematic assets and materials of industry and commerce.

Contact Information

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Carbon Fiber Remanufacturing (CFR), the Company and Manufacturing Partners

Committed Partners

The Carbon Fiber Remanufacturing (CFR) group develops alternatives to land filling of postindustrial carbon fiber materials for various industries that utilize carbon fiber. Industry experts estimate that 30% of carbon fiber will become excess or part of the waste stream in the manufacturing process.

CRF processes excess carbon fiber materials, scrap, end cuts and preform, by detangling, milling, cutting, and preparing the materials for use in certain production applications developed by CFR with its manufacturing clients. Critical to its ability to manage waste streams is the ongoing development of secondary uses and markets for these high tech post industrial carbon fibers.

Carbon Fiber Remanufacturing LLC (CFR), was initially operated inside of AdTech International, Inc. in business since 1997. AdTech business is the development of efficient and desirable solutions to a wide range of excess and problematic assets and materials of industry and commerce.

Today, CFR is able to offer large ongoing volumes of uniform grade carbon fiber broadgoods produced from these reclaimed fibers. These materials are offered through our knowledgeable sales team and distributors with technical support available from years of material testing at world renown testing laboratories.

New Partners

It is the material application and product designs of your Company that are of interest to us. It may be that your company and product mix already utilizes high tech carbon fibers for their great strength, light weight, fire retardancy, and corrosion resistance. You may be utilizing other fibers because of the high cost of virgin carbon fibers. Our interest is to simply explore the best applications for a “reclaimed carbon fiber” especially if the quality and ongoing volume could be assured and the pricing was discounted.

Benefits of Reclaimed Carbon Fiber

Why Reclaimed Carbon Fiber…

The reclaimed carbon fiber that is offered through the CFR program has specific properties and product benefits:

- Retained Virgin Properties
- Aerospace Grade
- Excellent Textile Processability
- Unique Thermal Properties
- Certified Recycled Material
- Premier Lightweight Fiber
- Qualifies End Products for 'Green' Label
- Superior Strength to Weight Ratio

PAN Fiber = Thermal Dominance

PAN carbon fiber is a thermally unique material. Unlike the competition, these fibers do not burn or melt when exposed to heat, they char. This self-extinguishing fiber retains its appearance, handling, and textile characteristics after open flame exposure. Additionally, PAN fibers exhibit very low toxic gas generation in fire, making them ideal for the most critical thermal applications. Improved thermal performance is also easily achieved using blends of PAN fiber with existing formulations or by incorporating heat shield layers in products.
PAN fiber is the top performing thermal fiber without requiring any harsh chemical coatings or additives. Carbon fiber's resistance to the most extreme temperatures, coupled with ease of manufacturing, make it the ideal choice for the highest quality thermal products on the market.

Broadgood Forms:
This highly diverse material is offered in a variety of forms to support our customers' applications:

- Nonwoven Wet Lay Products
- Air Laid & Needled Mats
- Fabrics From Thread Looms
- Rigid Board Insulation
- Molding Compound Reinforcement
- Cement Reinforcement
- Yarn

CFR Product / Market Advantages

Market Advantages for utilizing carbon fibers and materials from CFR

Certified Green
Virgin equal properties
Guaranteed quality and condition
Applications to automotive components, consumer goods, construction materials
Entrée to new emerging markets
Ongoing availability
Discounted cost
Materials engineering support
End of life recyclable formulas available

Market Access Advantages

Certified Green
Utilizing reclaimed, clean, post-industrial excess carbon fibers

Virgin equal properties retained
Fibers have not been heat treated nor chemically altered from their virgin properties

Guaranteed quality and condition
Fiber samples, lab testing reports, with Manufacturing Plans and FOD programs in place for Quality Control and predictable fiber shipments

Applications to automotive components, consumer goods, fabrics, construction materials Carbon fibers from CFR are excellent for use in Carbon Fiber Reinforced Plastics

Entrée to new emerging markets
Quickly expanding markets that will benefit from "green certified" reclaimed carbon fibers include automotive components,

Ongoing availability
PAN, 62%. Over 2,400,000 lbs in stock, can be cut to lengths of 1/4" to 3"
50,000 lbs / month incoming (from preform materials)
40,000 to 80,000 lbs / month incoming (from tow), can be cut to 1/8" to 6" lengths

PAN, 95%, 98% Available from tow and preform, cut to various lengths

Additional product forms can be developed to customer specifications for rolled broadgoods (cloth, veils, mat), yarn (in development), thermal insulation.

Discounted pricing
Discounted pricing from your current virgin fiber pricing

Materials engineering support
For your new product applications, materials engineering support for your conversion of existing product from fiberglass, plastic, aluminum, and steel to composites in consumer, industrial, automotive and aircraft industries.

End of life recyclable composite formulas available for select product applications

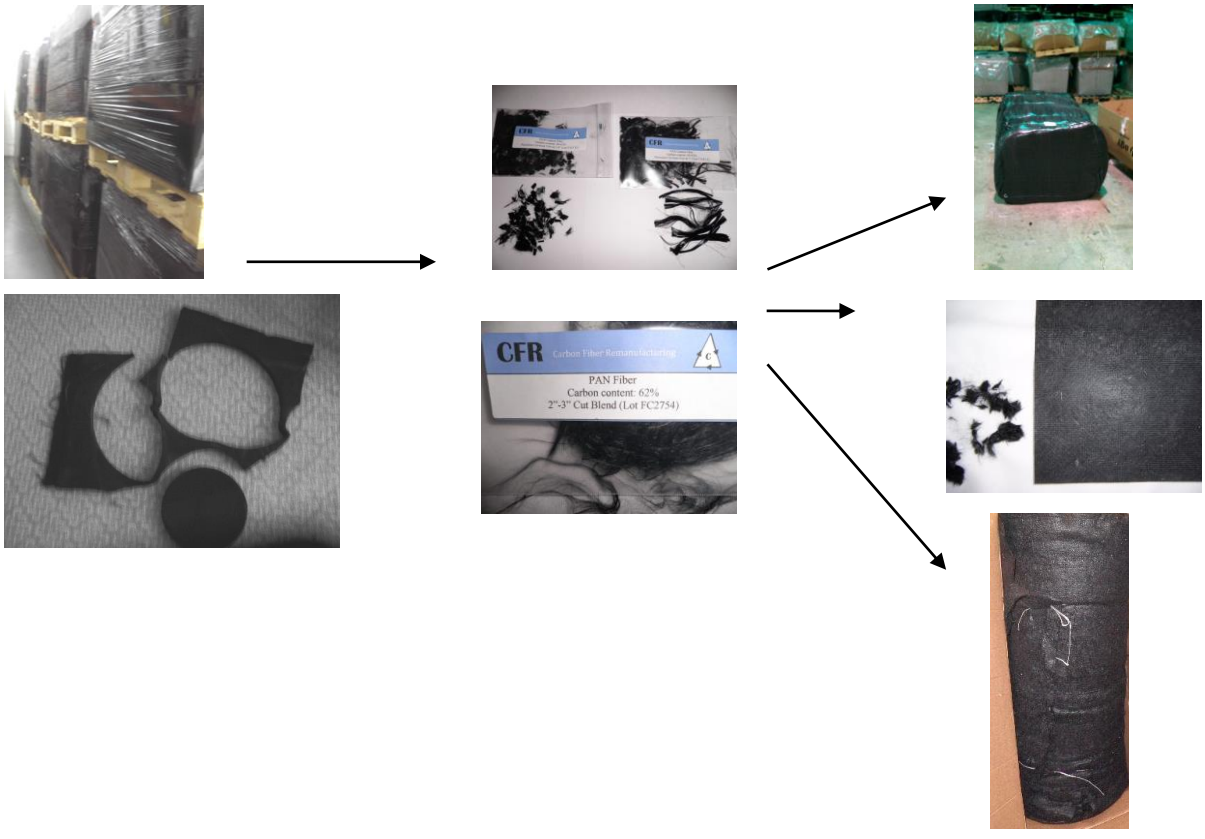
Reclaimed Carbon Fiber Process, Forms & Properties

CFR Recycled Carbon Fiber

Recovery Process
The fiber recovered by CFR is **not** processed through high temperature furnaces (pyrolysis) and is **not** chemically altered in any way. Our materials are collected in a manner where the virgin properties of the fiber are retained.

Material Form
The fiber is available in precision cut length as well as continuous tow on the spool. CFR is also working with numerous raw material formulators to produce broadgood materials such as veil, mat, felt, molding compound, thread, and other textile and industrial materials.

Grades Available
CFR offers carbon fiber within the range of 62% to 98% carbon content. Much of the fiber we offer is at the 62% content which allows our customers to carbonize the fiber to exact specifications they require. This approach has proven to support cost advantages to customers while achieving ideal properties in their products.



Carbon Fiber Introduction

Carbon fiber is derived from one of two synthetic precursor materials:

- PAN (polyacrylonitrile)
- PITCH

PAN fiber is the most widely used type of carbon fiber. PAN fiber yields greater tensile strength and elasticity due to its molecular structure.

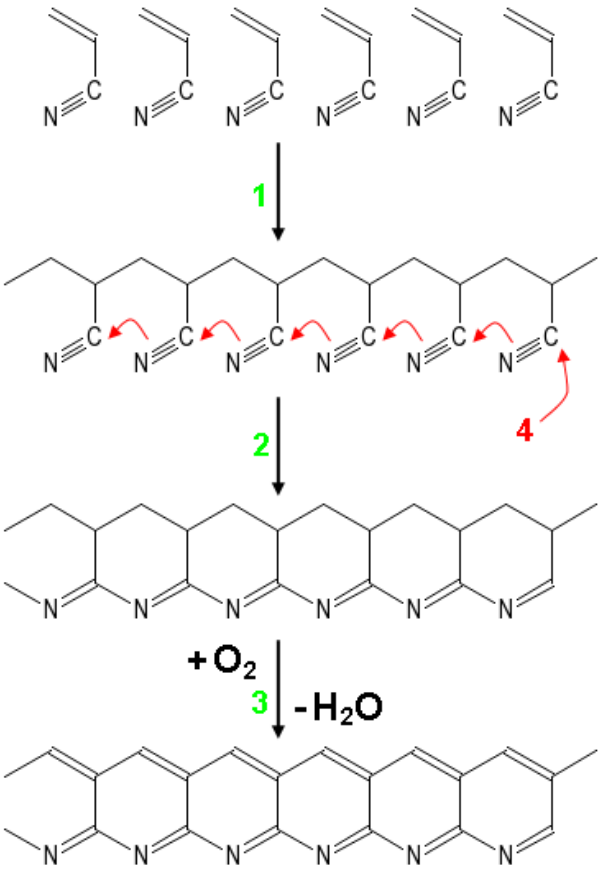


***Figure 1**: Chemical synthesis of PAN carbon fiber*

The process to produce carbon fiber may be broken into 4 major steps:

(1) Precursor Production: The synthetic PAN precursor fiber is wet spun in a process to produce a continuous fiber. The fiber does not have the characteristics of a high performance technical fiber at this stage.

(2) Oxidation: Fiber is heated to around 300ºC in air. This evolves hydrogen from the fiber and adds less volatile oxygen.

(3) **Carbonization (Graphitization):** Fiber is heat-treated to enhance physical and chemical characteristics. Like metal, heat-treating is dependent on the end application. Higher temperature exposure yields a higher carbon content of the fiber. Typical carbon contents of carbon fiber range from 60% up to 99%.

(4) **Surface Treatment / Sizing:** Depending on the final application, surface treatment and sizing is performed to result in fibers compatible with resins and other chemicals used in secondary processing or final applications.

The resulting material consists of fibers about 5-10 micrometers in diameter, composed mostly of carbon atoms forming a crystalline structure, with a high strength to volume ratio. Several thousand carbon fibers are combined in a continuous tow, which is often delivered on a spool. This form is commonly used to create a variety of materials from woven mats to chopped precision length fibers, depending on the end application.

Carbonization and Various Carbon Fiber Grades

Carbonization refers to heat-treating carbon fiber to alter the chemical structure of the fiber. The result of prolonged elevated temperature exposure is increased carbon purity and a turbostratic molecular structure. As the fiber becomes more pure in carbon content the tensile strength increases and the fiber becomes more conductive. The fiber also becomes more brittle as it reaches carbon contents above 98%, making them less suitable for certain applications.

Lower carbon content carbon fiber (~60%) also has advantages. These fibers are an industry standard for fire retardant textiles. They do not burn, melt, soften or drip – they self extinguish and emit very low toxic fumes as compared to other fire resistant textiles. These properties are also enhanced by the inherent low specific gravity and high strength of carbon fiber.

Carbonization Temperature (ºC)	to 1000	1500-2000	2000+ (Graphitization)
Grade of Carbon Fiber	Pre-Ox	Intermediate Modulus	High Modulus
Modulus of Elasticity, Gpa (msi)	4 (0.6)	250 - 325 (65)	325 - 400 (80)
Carbon Content	62%	90-95%	98%

***Figure 2**: Typical values of carbon fiber at various carbonization levels*

Carbon Fiber Comparison Guide

Carbon fiber has become widely accepted as the most advanced material with superior physical and chemical properties. Besides their great strength to weight ratio, carbon fiber also boasts excellent chemical stability, low CTE, and high electrical conductivity. The following chart shows how these fibers compare in their varying grades and how properties measure up to glass fiber, steel, and aluminum.

MATERIAL	DENSITY (kg/m^3)	ELASTIC MODULUS (Mpa)	TENSILE STRENGTH (Mpa)	COEFFICIENT OF THERMAL EXPANSION ($ºC^{-1}$)	USEFUL TEMP LIMIT, T_{MAX} (ºc)
Steel	7800	205,000	400-1500	1.3×10^{-5}	800
Aluminum	2800	75,000	450	2.2×10^{-5}	350
Titanium	4400	40,300	1200	0.8×10^{-5}	700
"R" Glass	2500	86,000	3200	0.3×10^{-5}	700
"E" Glass	2600	74,000	2500	0.5×10^{-5}	700
Kevlar 49	1450	130,000	2900	-0.2×10^{-5}	
Carbon (Pre-Ox, 62% Carbon)	1360	4,000	300	NA	>1500
Carbon (Intermediate Modulus)	1750	300,000	3200	0.02×10^{-5}	>1500
Carbon (High Modulus)	1800	325,000	2500	0.08×10^{-5}	>1500

Market Summary by Carbon Content

Market Breakdown Sheet of Potential Products to Utilize Reclaimed Carbon Fiber, by Carbon Content

	Carbon Content		
	62%	**95%**	**99%**
Aerospace	Insulation mat, Insulation fabrics from thread, Insulation composite laminates	Re-usable shipping containers and pallets, Floor boards, Tray Tables, Non-critical seat components, Bins, Cabinets and other interior components, UAV exterior skins, UAV internal components	
Automotive	Friction materials (transmission, brakes, bearings), Insulation mat, Insulating composite laminates, Fireproof driving suits, Fuel tank heat shield, Under body insulation, Engine covers, Motorcycle Exhaust, Motorcycle insulation	Exterior panels (fender, hood, roof, doors, framing, etc), Interior components, Truck beds, Floor panels, Side mirror housing, Wiper tub, Bumper reinforcement, Plenums, Air intakes, Filter housings, Glove box, Truck footstep, Motorcycle fairings, Electric motor components	Fuel cell membrane paper, Battery components
Transportation (Bus & Train)	Insulation, Friction materials (transmission, brakes, bearings), Fuel tank heat shield, engine covers, underbody insulation	Exterior panels, Interior components, floor boards, Tray tables, Non-critical seat components, Bins, Cabinets, Re-usable shipping containers and pallets.	Fuel cell membrane paper, Battery components
Marine		Boat hull reinforcement, Floor panels, interior components, Footsteps and ladders, Yacht Interiors (Tables, Storage, etc.), Jet ski fairings, Jet ski hull reinforcement	
Construction/ Industrial/ Home	Insulation mat, Welding blankets, Furniture insulation backing (mattress), Friction materials (transmission, brakes, clutches), Furnace insulation, Pultruded fireproof panels	Expansion resistant components (door and window jams, frames, etc.), Floors and railings, Corrosion resistant components, Pier pilings, Dock materials, Wind turbine components, Furniture	Conductive filter media, Fuel cell membrane paper, Battery components
Recreational		Kayaks, Tennis rackets, Lacrosse sticks, Hockey sticks, Snowboards, Skis (water, snow, cross-country), Skates, Exercise equipment, ATV fairings, Paddles	

UPDATE: 7/27/2011

PAN Fiber Product Application Matrix

Product Form & Application Matrix, 62% Carbon Content, Reclaimed Carbon Fiber

Product Application	Fiber Length	Broadgood Form	Description
Mattress Flame Resistant Covers	1/4 - 3/4"	Nonwoven Veil	*No transferable chemical coatings, very low toxic gas emission during fire,*
	1 - 2"	Thread ---> Fabric	*No transferable chemical coatings, very low toxic gas emission during fire, can be blended with cotton while retaining fire retardant properties.*
Furniture Flame Resistant Covers / Layers	1/4 - 3/4"	Nonwoven Veil	*No transferable chemical coatings, very low toxic gas emission during fire,*
	1 - 2"	Thread ---> Fabric	*No transferable chemical coatings, very low toxic gas emission during fire, can be blended with cotton*
Pultrusion Thermal Panels	1/4 - 3/4"	Nonwoven Veil	*Improved thermal properties, weight reduction, improved strength and toughness, non-corrosive.*
	2 - 3"	Air-Laid Needled Mat	*Improved thermal properties, weight reduction, improved strength and toughness, non-corrosive.*
Automotive Insulation	1/4 - 3/4"	Nonwoven Veil	*Lightweight, withstands extreme temperatures, acoustical insulation, black in color.*
	2 - 3"	Air-Laid Needled Mat	*Lightweight, withstands extreme temperatures, acoustical insulation, easily conforms to contours, black in color.*
Furnace Rigid Board Insulation	2 - 3"	Air-Laid Needled Mat	*Capable of extreme temperatures, withstands open flames with low toxic gas emission, low coefficient of thermal expansion, low density, increased resistance to chemical deterioration and moisture absorbance.*

Product Application	Fiber Length	Broadgood Form	Description
Carbon / Carbon Brakes - Trucks & Heavy Construction Equipment	2 - 3"	Air-Laid Needled Mat	*Reduced raw material price, increased maintenance intervals, weight reduction, high temperature capability, reduced dust generation, non-corrosive.*
Carbon / Carbon Brakes - High Performance Auto & Racing	2 - 3"	Air-Laid Needled Mat	*Reduced raw material price, increased maintenance intervals, weight reduction, high temperature capability, reduced dust generation, non-corrosive.*
Fireproof Clothing / Racing Suits	1 - 2"	Thread ---> Fabric	*No transferable chemical coatings, very low toxic gas emission during fire, can be blended with cotton while retaining fire retardant properties.*
Thermal Tape	1/4 - 3/4"	Nonwoven Veil	*Capable of extreme temperatures, withstands open flames with low toxic gas emission, low coefficient of thermal expansion, low density, increased resistance to chemical deterioration and moisture absorbance.*
Railway Carbon / Carbon Brakes	2 - 3"	Air-Laid Needled Mat	*Reduced raw material price, increased maintenance intervals, weight reduction, high temperature capability, reduced dust generation, non-corrosive.*
Welding Blankets	2 - 3"	Air-Laid Needled Mat	*Lightweight, withstands extreme temperatures, easily conforms to contours, withstands open flame with very low toxic gas emission.*
	1 - 2"	Thread ---> Fabric	*Lightweight, withstands extreme temperatures, easily conforms to contours, withstands open flame with very low toxic gas emission.*

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Carbon Fiber Remanufacturing

Remanufactured Materials
Product Summary

Reclaimed Fibers from Preform:

Cut PAN fiber, 62% carbon content, ¼" to 3" cuts
Cut PAN fiber, 62% carbon content, 2" to 3" blend (for non-woven apps)

Reclaimed Fibers from Tow:

Cut PAN fiber, 62% carbon content, 1/8" to 6" precision cuts

Cut and crimped PAN fiber, 62% carbon content, 1/8" to 6" precision cuts

PAN fiber non-woven mat

PAN fiber non-woven mat, 90% carbon content

PAN cut fibers, 95% carbon content, cut to various lengths

PAN cut fibers, 98% carbon content, cut to various lengths

PAN fiber non-woven mat, 98% carbon content

PAN 3" fiber, carded, cross lapped, needled, 62% carbon content, no binder

PAN 3" fiber mat, blend of 25% carbon fiber, 75% basalt fibers

Yarn

Produce to customer specifications:

Veils
Mats
Compounds
Insulation, soft and rigid

CFR C FIBER

Carbon Fiber Remanufacturing

Converting Post Industrial Carbon Fiber to New Product

Pre-oxidized PAN Fiber
(Polyacrylonitrile) Recyclate Material
Cut Fiber

2,400,000 lbs available
Plus Ongoing Volume Contract of 45,000 lbs per month

For Sale

Product: Processed polyacrylonitrile (PAN) fibers stabilized in a high temperature process allowing the finished product to retain their appearance, hand, and textile characteristics after exposure to open flame. This material will not burn, melt, or drip, but will rather char and self-extinguish. These fibers are 62-65% carbon. This is dry fiber. This is not "pre-preg" material (fiber already mixed with resins or treatments that would have to be removed).

Fiber Type: Staple fiber with varied lengths with range as indicated in Auburn University lab report available through our office (decompacted only).

Manufacturer: The fiber will be produced by one of two companies:
Pyron pn37 from Zoltek, see specs at: http://www.zoltek.com/products/pyron.php
Panox from SGL, see specs at http://www.sglcarbon.com/sgl_t/fibers/panox.html

Volume: Approximately 2,400,000 lbs) currently available.

Repeating Approximately 45,000 lbs per month of additional product is available. Buyer may contract for Volume: container volume on an ongoing annual or multi-year basis.

Cut Fiber Specification: Fiber material can be cut to your order in nominal lengths of:

Metric	Inches
6 mm	.25
12 mm	.50
20 mm	.75
	3.0"

Buyer Option: Buyers may describe their application requirements for specific cut lengths or other granulation or random length specifications.

Properties:

Elongation	**Tensile Strength**	**Modulus**	**Density**
%	MPa	GPa	g/cm3
20-32	> 210 MPa (270-330 typical)	3.3-4.9	1.355-1.385

Geometry:	Geometry of de-compacted material will be typical shown as in attached photos. Fiber diameter is 12.5 microns. Density is 1.37 g/cm3. Denier is 1.512 grams.
Samples:	Samples may be requested with your courier account and delivery instructions. Specify cut length(s) of sample material requested. If first small samples and lab testing are satisfactory to you, a larger test run sample for your process may be ordered.
Packing:	Material is boxed or super-bagged and can be floor loaded. Box or bag dimensions will maximize use of 40 foot container or 53 foot trailer. Material is typically delivered in gaylords weighing approximately 50 lbs each.
Condition:	Clean product, post industrial, direct from processing plant. Because of the process to produce the preform in a needle punching operation, there may be occasionally small broken needle tips embedded within the material. The needles are a stainless steel and the size of what remains in the preform is normally less than 1 mm in length. Equipment is designed into the present system to remove most if not all of this material including magnets.
Photos:	Product photos may be ordered and sent via email.
Restrictions:	None. Include general description of your intended general application in your offer to purchase along with the projected volume per month of your desired order.
Applications:	Carbon Fiber Reinforced Plastic (CFRP) products, auto fire walls, vehicle seat cushion, furniture fabrics and cushion material, fire retardant clothing, and many other applications for materials and liners requiring a material to slow or block heat or fire. Also used in the plastics industry for e-static discharge. Longer cut material may be utilized for re-weaving into cloth, filter, or other high temperature applications.
FOB:	Midwest, USA
Availability:	2011 / Subject to prior sale.
Terms:	Payment in full before shipping.
Price:	Call for quotation based on customer requirements and final specifications. Buyer may contract for all or a portion of the excess material presently stored. Buyer may order test loads of 1 container minimum orders. Availability subject to prior sale.

For more product and pricing information, contact:

Tony Guhr directly at 316-799-2166. Email: tguhr@CarbonFiberRemanufacturing.com

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Carbon Fiber Remanufacturing

Converting Post Industrial Carbon Fiber to New Product

PAN Fiber (Polyacrylonitrile)
Excess industrial grade material
Precision Cut Fiber

Qualifies for “green certification” as a reclaimed fiber

40,000 lbs. / month available
Ongoing Volume For Sale

Product:	Processed polyacrylonitrile (PAN) fibers stabilized in a high temperature process allowing the finished product to retain their appearance, hand, and textile characteristics after exposure to open flame. This material will not burn, melt, or drip, but will rather char and self-extinguish. These fibers are 60-62% carbon. This is dry fiber. This is not pre-preg.
Fiber Type:	Staple fiber with precision cut length.
Manufacturer:	The fiber is produced by world’s primary fiber manufacturers.
Volume:	40,000 lbs available per month ongoing. Small lot requests will be considered on case basis.
Repeating	Buyer may contract for Volume on an ongoing annual or multi-year basis.
Cut Fiber Specification:	Fiber material can be cut to your order in nominal lengths of 3 mm (1/8”) to 6”

Crimped Option: Buyer may order these fibers crimped, 6-12 per inch.

Typical Properties:

Density, g/cm3	1.25
Denier	1.20 (ASTM D1577 – Option C)
Diameter	12.0 microns
Elongation %	12.5
Tensile Strength, Mpa	265 (ASTM D3822)
Modulus, GPa	3.5

Tests for properties were conducted by North Carolina State University.

Geometry:	Geometry of de-compacted material will be typical shown as in attached photos. Fiber diameter is 12.0 microns. Density is 1.25 g/cm3. Denier is 1.20 grams.
Samples:	Samples may be requested with your courier account and delivery instructions. Specify cut length(s) of sample material requested.
Packing:	Material is loose packed in poly lined box, floor loaded or palletized.
Condition:	Clean product, post industrial, direct from processing plant. Fibers have not experienced any additional chemical ore thermal processing since leaving the producer.
Photos:	Product photos may be requested and sent via email.
Restrictions:	None. Include general description of your intended general application in your offer to purchase along with the projected volume per month of your desired order.
FOB:	Southeast, USA. Supplier will deliver freight.
Availability:	September, 2011 Subject to prior sale.
Terms:	TBD
Price:	Call for quotation based on cut length, customer requirements and final specifications. Buyer may contract for all or a portion of the excess material presently stored. Buyer may order test loads of 1 container minimum orders. Materials are availability subject to prior sale.

For more product and pricing information, contact:

Tony Guhr directly at 316-799-2166. Email: tguhr@CarbonFiberRemanufacturing.com

CFR Fiber Disposal Program Options

Disposal Program Options

Preferred Materials

Dry carbon fibers, either PAN (62%) or fully carbonized fibers (90-99%)
Staple, tow, woven or preforms
With uniform specifications
Clean post industrial scrap or excess collected without contamination
With long term volumes
Prefer truckload volumes, with repeating delivery schedules

We are presently not able to take any product that has been resin impregnated.

Once the scrap or excess materials have been reviewed and tested and the materials matched to an existing remanufactured product by CFR, or a new end use is developed by CFR in coordination with its manufacturing clients, shipping the product from your facilities can be scheduled.

Long Term Schedule

CFR has certain remanufactured products for which certain carbon fiber scrap can be utilized on an immediate basis. CFR will propose a long term disposal agreement so that there is sufficient time to develop the product applications for each scrap stream. The long term arrangements will also allow for the important return on investment required to develop each new product remanufacturing application.

Disposal Program Options:

1. Standard Disposal
The standard disposal option is the basic contracted service offered by CFR to dispose of the repeating inventories of excess and scrap carbon materials for the Corporation generating the waste stream. This service may require a cost for the service or may be offered at no cost, depending upon the details of the volume and specifications of the carbon fibers involved.

2. Purchase and Disposal
In cases in which the scrap has some predictable value above processing and remanufacturing costs, a purchase price may be offered to the waste stream generator for the disposed materials.

3. Disposal structured as a charitable contribution
CFR was formed out of the company, AdTech International, Inc. which has 20 years of experience in assisting Corporations with excess inventory by structuring the disposal of excess materials as a charitable contribution that provides funding to government qualified and approved Nonprofit Organizations. This program may provide certain tax benefits to the generating Corporation.

Summary of Material Information needed to consider your excess and scrap materials:

- Product description with specifications and MSDS sheet
- Volume per day, week, month
- Condition of materials, contamination if any
- Packaging
- Samples

Note: If preferred, request materials description form

Program Process

1. Call or write for general inquiry and get acquainted visit
2. Present summary of product / materials to be considered for program
3. CFR review of materials, lab testing where required, matching to a remanufactured product program
4. CFR visit to your plant
5. Confirmation of match of materials
6. Determination of optimum disposal program option for the generating corporation
7. Scheduling of disposal program start