



**ANWIN TECHNOLOGY CO., LTD.**

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## **Carbon Fiber Reinforcements**

### **Carbon Fiber Strands**

#### **Product Description**

TAIRYFIL carbon fiber from FORMOSA PLASTICS GROUP is derived from PAN(polyacrylonitrile) precursor, providing high strength-to-weight, high stiffness-to-weight, high modulus of elasticity and low density for maximum performance properties. The successive surface treatment and sizing improve handleability and compatibility to various polymers or resin matrices.

#### **Applications**

Carbon fiber can be used in combination with various thermoset and thermoplastic resin systems in many applications where reduced weight, high specific modulus and high stiffness and strength to structure are desired :

- Aircraft & Aerospace: jet aircraft, satellite, rocket, C/C disk brake, primary and secondary structures etc.
- Industry: storage tank, CNG tank, piping, bearing, roller etc..
- Sports goods: tennis and badminton rackets, fishing rod, bow and arrow, golf shaft, bicycle, ski-board and surfboard etc.
- Civil engineering: constructive and repairing reinforcements for bridges and buildings.
- Alternative Energy/Wind Energy; blade of wind mill, fuel cell etc..
- Transportation: vehicle, yacht, frame, reinforcement parts for brake, spring, drive shaft etc..
- Electric and electronic devices; LCD cassette, spare parts for robot, computer, TV antenna etc..



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### Products and Typical physical properties

Product		Number of filament	Yield(Tex) (g/1000m)	Tensile Strength		Tensile Modulus		Elongation (%)	Density (g/cm <sup>2</sup> )	Filament Diameter( $\mu$ )
Fiber type	unit			Ksi	Mpa	Msi	Gps			
TC-33	1.5K	1,500	100	500	3450	33	230	1.5	1.8	7
	3K	3,000	200	500	3450	33	230	1.5	1.8	7
	6K	6,000	400	500	3450	35	230	1.5	1.8	7
TC-35	3K	3,000	200	580	4000	35	240	1.6	1.8	7
	6K	6,000	400	580	4000	35	240	1.6	1.8	7
	12K	12,000	800	580	4000	35	240	1.6	1.8	7
	24K	24,000	1600	580	4000	35	240	1.6	1.8	7
	48K	48,000	3200	580	4000	35	240	1.6	1.8	7
TC-36S	12K	12,000	800	710	4900	36	250	2.0	1.81	7
TC-42S	12K	12,000	440	750	5170	42	290	1.8	1.81	5.6
	24K	24,000	880	750	5170	42	290	1.8	1.81	5.6



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## **Chopped Carbon Fiber Strands**

### **Product Description**

TAIRYFIL chopped fiber strands are the short carbon fiber strands in several mm length with optimum aspect ratio and coated with particular formulated binder to provide good processability, and resin matrix compatibility properties and are used for a variety of either thermoplastic composite through injection molding, compression and extrusion processes or thermoset composite in the form of BMC or SMC.

The chopped strands are provided 6mm length for use in thermoplastic composite compounding and 3~108mm length for thermoset composite BMC, SMC processes.

### **Key features**

- Excellent compatibility with thermoplastic or thermoset matrices.
- Superior mechanical properties
- Improved electrical and thermal conductivity
- Higher heat distortion temperature
- Improved thermal expansion stability
- Excellent dimensional stability
- Improved warp resistance



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### Products and typical properties

Grade	Coated type	Coated Wt(%)	Bulk Density(g/l)	Main applications
CS-2516	Not disclosed	2.5~3.0	> 420	GPTP-PC,ABS,PPE,PET,PBT, PA,POM,LCP and related polymers
CS-216H	Not disclosed	2.0~2.7	> 395	HTTP-PEI,PEEK
CS-004	Water	No sizing	> 400	Water dispersible use
CS-815	Water soluble	3.0~4.0	> 420	Water dispersible use
CS-15	Epoxy	1.2~1.5	> 380	BMC,SMC Process

1.Any specified requirement please contact our sales representative for more information

### Applications

- Aerospace parts
- Automotive parts
- Electronic components
- Sports and Recreation goods
- Civil engineering
- Windmill blades
- Medical devices