

MITSUBISHI CHEMICAL CORPORATION Carbon Fiber & Composites

Carbon Fiber Tow(Continuous Fiber)

Carbon fiber is a high-strength and high modulus material, yet its specific gravity is only one-fourth that of steel. It therefore enables high strength, high rigidity, and weight-saving in a broad variety of applications. Carbon fiber tow, made of bundles of untwisted filaments, is the most basic material in our carbon fiber product line.



PYROFIL[™]

Fiber type	Filament count	Filament dia. (µ m)	Tensile modulus _(GPa)	Tensile strength (GPa)	Yield (mg/m)	Density (g/cm³)
TR 30S 3L	3,000	7	235	4.12	200	1.79
TR 50S 6L	6,000	7	235	4.90	400	1.82
TR 50S12L	12,000	7	235	4.90	800	1.82
TR 50S15L	15,000	7	235	4.90	1,000	1.82
TR 50D12L	12,000	7	235	5.00	800	1.82
TRH50 18M	18,000	6	250	5.30	1,000	1.82
TRH50 30M	30,000	6	255	5.60	1,670	1.82
TRH50 60M	60,000	6	250	4.83	3,200	1.81
TRW40 50L	50,000	7	240	4.12	3,750	1.81
MR 60H 24P	24,000	5	280	5.68	960	1.81
MR 70 12P	12,000	5	324	7.00	415	1.82
HR 40 12M	12,000	6	375	4.41	600	1.82
HS 40 12P	12,000	5	425	4.61	430	1.85

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Carbon Fiber Tow(Continuous Fiber)

GRAFIL

Fiber type	Filament count	Filament dia. (µ m)	Tensile modulus (GPa)	Tensile strength (GPa)	Yield (mg/m)	Density (g/cm³)
34-700	12,000	7	234	4.83	800	1.80
34-700	24,000	7	234	4.83	1,600	1.80
37-800	30,000	6	255	5.52	1,675	1.81
34-600	48,000	7	234	4.48	3,200	1.80

Fiber type	Filament count	Tensile modulus (GPa)	Tensile strength (GPa)	Yield (mg/m)	Density (g/cm³)	Thermal conductivity (W/mK)	Electrical Resistivity (μΩm)
K1352U	2,000	620	3.60	270	2.12	140	6.6
K1392U	2,000	760	3.70	270	2.15	210	5.0
K13C2U	2,000	900	3.80	275	2.20	620	1.9
K13C6U	6,000	900	3.60	760	2.18	580	2.0
K13D2U	2,000	935	3.70	365	2.20	800	1.5
K13312	12,000	420	3.20	1,550	2.05	110	8.0
K63712	12,000	640	2.60	2,000	2.12	140	6.6
K13916	16,000	760	3.00	2,200	2.15	200	5.1
K63A12	12,000	785	2.60	1,950	2.15	220	4.7

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