

Carbon Chopped Fiber & Milled Fiber (Short Fiber)

Carbon Chopped Fiber is a product made by chopping carbon fiber tow.

Carbon Milled Fiber is a product made by milling chopped fiber into a powder (milled) form. Chopped fiber is typically around 3 to 6 mm long, while milled fiber is typically less than 200 μm long. Both of these materials are used to enhance the physical properties of thermoplastic resins and rubbers, and to increase electrical and thermal conductivity.



Milled fiber

DIALEAD™ (High rigidity and high thermal conductivity grade)

Product name	Carbon fiber type	Fiber length (mm)	Material properties (reference)			
			Thermal conductivity (W/mK)	Electrical resistivity [$\mu\Omega\text{m}$]	Density (g/cm ³)	Fiber diameter (μm)
K223HM	PITCH	0.05/0.20	550	2.3	2.2	11
K23FHM	PITCH	0.05/0.20	1200	1.05	2.2	11
K23GHM	PITCH	0.05/0.20	1300	0.95	2.2	11

DIALEAD™ (Antistatic grade)

Product name	Carbon fiber type	Cut length (mm)	Surface resistivity* (Ω/sq)
K223EM	PITCH	0.2	10 ^{7.5}

* Surface resistivity: measured as a milled-product aggregate

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<https://www.m-chemical.co.jp/carbon-fiber/en/product/mid/>



Carbon Chopped Fiber & Milled Fiber (Short Fiber)

Chopped Fiber PYROFIL™

Product name	Carbon fiber type	Sizing agent	Sizing content (%)	Fiber length (mm)	Material properties (reference)			
					Thermal conductivity (W/mK)	Electrical resistivity ($\mu\Omega\text{m}$)	Density (g/cm ³)	Fiber diameter (μm)
TR06U	PAN 24t	Urethane-based	4.2	6	7	16	1.81	7
TR06NE	PAN 24t	Polyamide-based	3	6	7	16	1.81	7
TR066A	PAN 24t	Epoxy-based	3	6	7	16	1.81	7
TR06Q	PAN 24t	Heat-resistant epoxy-based	2.5	6	7	16	1.81	7
TR03CM	PAN 24t	Water	12	3	7	16	1.81	7
MR03NE	PAN 30t	Polyamide-based	3	3	16	13	1.82	5

GRAFIL™

Product name	Carbon fiber type	Sizing agent	Sizing content (%)	Fiber length (mm)	Material properties (reference)			
					Thermal conductivity (W/mK)	Electrical resistivity ($\mu\Omega\text{m}$)	Density (g/cm ³)	Fiber diameter (μm)
PA6-2	PAN 24t	Polyamide-based	7	6	7	16	1.81	7
PU6-1	PAN 24t	Polyurethane-based	3	6	7	16	1.81	7
PU6-2	PAN 24t	Polyurethane-based	3	6	7	16	1.81	7
PU6-30	PAN 24t	Polyurethane-based	4	6	7	16	1.81	6
PA6-30	PAN 24t	Polyamide-based	4	6	7	16	1.81	6
PU6-K-30	PAN 24t	Polyurethane-based	5	6	7	16	1.81	6
PHT-1	PAN 24t	Epoxy-based	5	6	7	16	1.81	6

DIALEAD™

Product name	Carbon fiber type	Sizing agent	Sizing content (%)	Fiber length (mm)	Material properties (reference)			
					Thermal conductivity (W/mK)	Electrical resistivity ($\mu\Omega\text{m}$)	Density (g/cm ³)	Fiber diameter (μm)
K223SE	PITCH 20t	Polyamide-based	3.0-5.0	6	20	15	2	11
K223HE	PITCH 90t	nil	nil	6	550	2.3	2.2	11
K6371T	PITCH 65t	Epoxy-based	1.0-3.0	6	140	6.6	2.1	11

Values in this table are typical values, not guaranteed values.

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