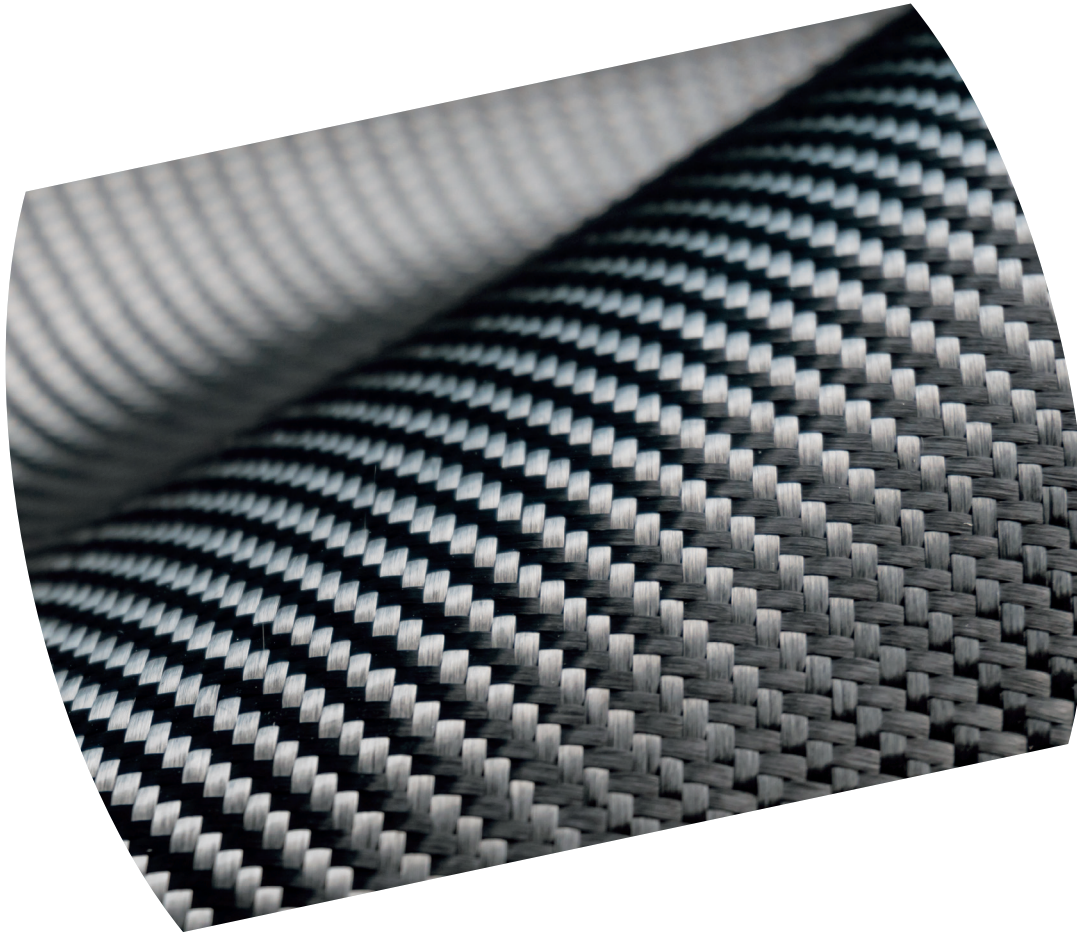




MOCOM

WIC – Carbon fiber compounds Light, strong, sustainable

WIC products are high-performance plastics based on carbon fibers with a very attractive cost/benefit ratio.

WIC compounds, manufactured on the basis of recycled carbon fiber fabric residues, are characterized by excellent mechanical properties combined with low density, i.e. low weight. Its specific strength qualifies the material ideally for lightweight construction applications. This helps, for example, to reduce the CO₂ emissions of vehicles by saving weight emissions or to make mobile applications lighter and therefore more comfortable.

The standard products today include WIC compounds based on PA66, PA6 and PP. Application-specific solutions based on other filler combinations and customizing can be developed. In addition to the special properties and the lightweight construction

potential, WIC products also offer interesting savings compared to highly filled glass fiber compounds when the volume/part price is taken as a basis.

WIC – Carbon fiber compounds: the advantages at a glance

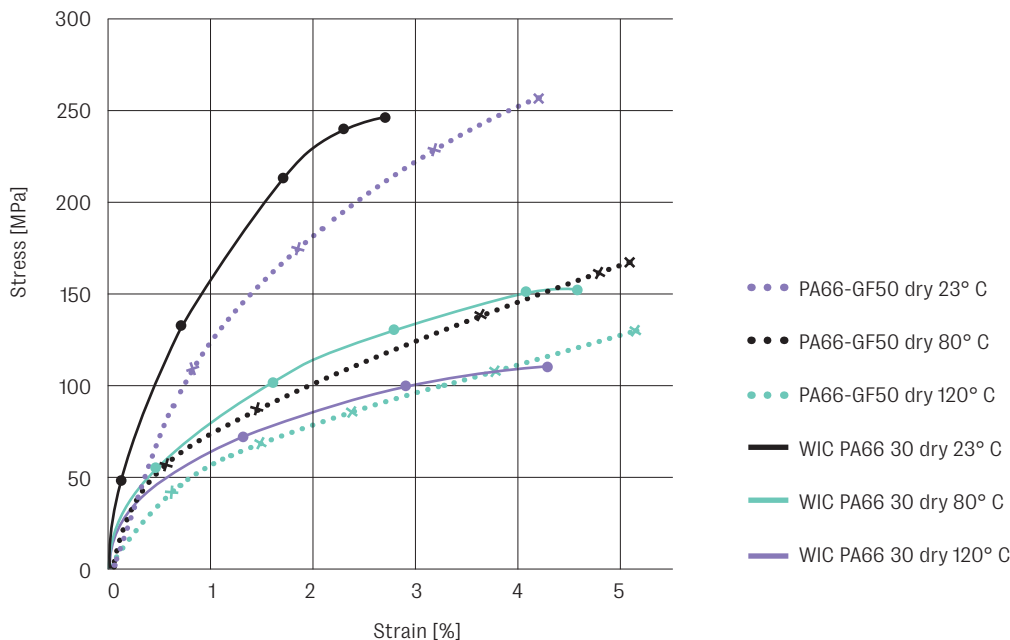
- Low density → Lightweight construction
- High strength stiffness (metal replacement potential)
- Good friction/wear resistance
- High dimensional stability
- Design freedom

Material name	CO ₂ -Footprint (GWP100) [kg CO ₂ eq.] GaBi (DIN EN ISO 14040/14044)	Carbon fiber content	Density [g/cm ³] ISO 1183	Tensile Modulus (dry/cond.) [MPa] ISO 527-1/-2*	Tensile Stress at Yield (dry/cond.) [MPa] ISO 527-1/-2*	Impact Strength (dry/cond.) 23° C [kJ/m ²] ISO 179/1eU*	Notched Impact Strength (dry/cond.) (23° C) [kJ/m ²] ISO 179/1eA*
WIC PA6 10	6,08	10	1,17	9.000 / 5.000	135 / 85	40 / 71	4 / 8
WIC PA6 20	5,72	20	1,23	15.500 / 8.200	190 / 106	58 / 70	7 / 12
WIC PA6 30	5,23	30	1,27	22.500 / 11.500	200 / 125	55 / 65	10 / 14
WIC PA6 40	4,79	40	1,34	29.000 / 14.200	210 / 125	50 / 55	9 / 12
WIC PA66 10	6,04	10	1,18	9.000	145	30	3,5
WIC PA66 20	5,60	20	1,23	16.000 / 11.000	195 / 140	50 / 63	6 / 8
WIC PA66 30	5,06	30	1,27	22.500 / 14.000	210 / 152	55 / 60	8 / 10
WIC PA66 40	4,54	40	1,33	30.000 / 18.000	225 / 160	50 / 60	7 / 9
WIC PP 10	1,50	10	0,97	5500	60	30	6
WIC PP 20	1,36	20	1,01	9500	80	48	9
WIC PP 30	1,26	30	1,07	13000	93	52	10
WIC PP 40	1,17	40	1,13	15.500	93	36	9

Further products and information on request.

* Measured values PA (cond.) based on test specimens conditioned according to ISO 1110.

Stress-Strain Curves PA66-GF50 vs. WIC PA66 30



MOCOM data sheets

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