Fluon+ COMPOSITES

AGC

CFRTP/CFRP

improved by Functionalized Fluoropolymers

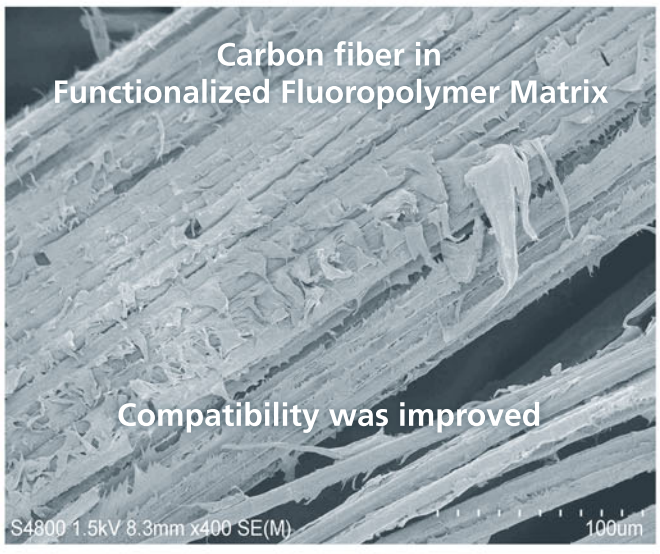
A ground-breaking development for composite design

Benefits

- Universal fiber-matrix adhesion
- Wide temperature range (-200°C up to 260°C)
- Impact strength improvement
- Excellent dielectric properties
- Vibration damping
- Almost zero water absorption
- High temperature adhesive
- Flame retardancy
- Reduction of micro cracking
- Prevention of galvanic corrosion
- Superior chemical resistance
- Low friction surface

Fiber-Matrix Adhesion with Base Polymer

Modification of base polymer of CFRTP

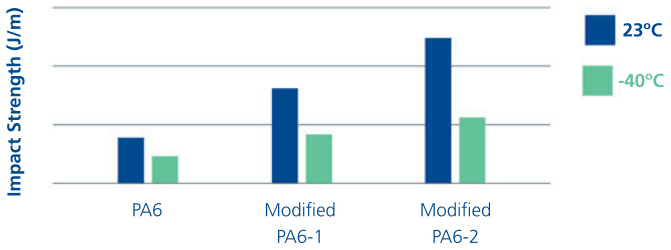


Surface modification of CFRTP

Physical Properties of CFRTP Modified by Fluoropolymer

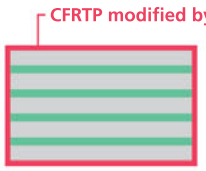
Modified - Plastics	Impregnation	Carbon Fiber	Vf (%) Fiber volume content	Physical Property of CFRTP			
				Impact Strength	Tensile Strength	Flexural Strength	Water Absorption
Modified-PA6 CFRTP	Powder	Yarn Spreading Cloth	SD	Improved	Same	Same	Ultra-low
Modified-PA6 CFRTP	Film	Cloth	SD	Improved	Same	Same	Ultra-low

Other modified plastics (mPPS, mPEI, mPEEK, mPA12, mPAMXD6) were also verified to be improved in their impact strength.



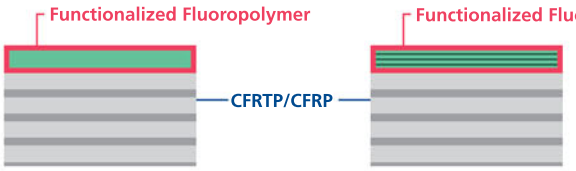
Design Examples

Modification of base polymer of CFRTP



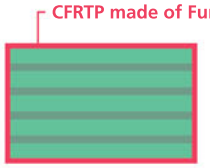
- Wear performance
- Chemical resistance
- Impact strength
- Low water absorption

Surface modification of CFRTP



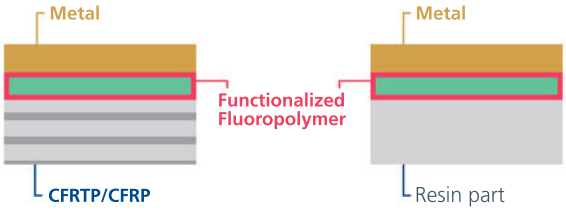
- Wear performance
- Chemical resistance
- Flame retardance
- Low water absorption

Primary base polymer of CFRTP



- Wear performance
- Chemical resistance
- Flame retardance
- Low water absorption
- Vibration damping

Adhesion of multi-material



- Chemical resistance
- Prevent galvanic corrosion

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