

Intermediate Modulus & High Strength PAN-based Carbon Fiber PYROFIL™ MR50R, MR 65A, MR 70

Aerospace /
High-End Mobility

PYROFIL™ MR 50R designed for CF RTP

Designed for thermoplastic aerospace composites, MR 50R combines high stiffness with **outstanding toughness and damage tolerance**. Enhanced impact resistance against bird strikes and operational impacts supports lighter, safer, and more durable aircraft structures.

PYROFIL™ MR 65A (6 GPa Class)

6 GPa-class tensile strength and 285 GPa modulus, MR 65A is ideally suited for a **wide range of aerospace structural applications**, including primary aircraft structures, where outstanding strength, durability, and weight efficiency are required. Its balanced tensile, compression, and interfacial properties enable **highly reliable composite structures** for demanding aerospace environments.

PYROFIL™ MR 70 (7 GPa Class)

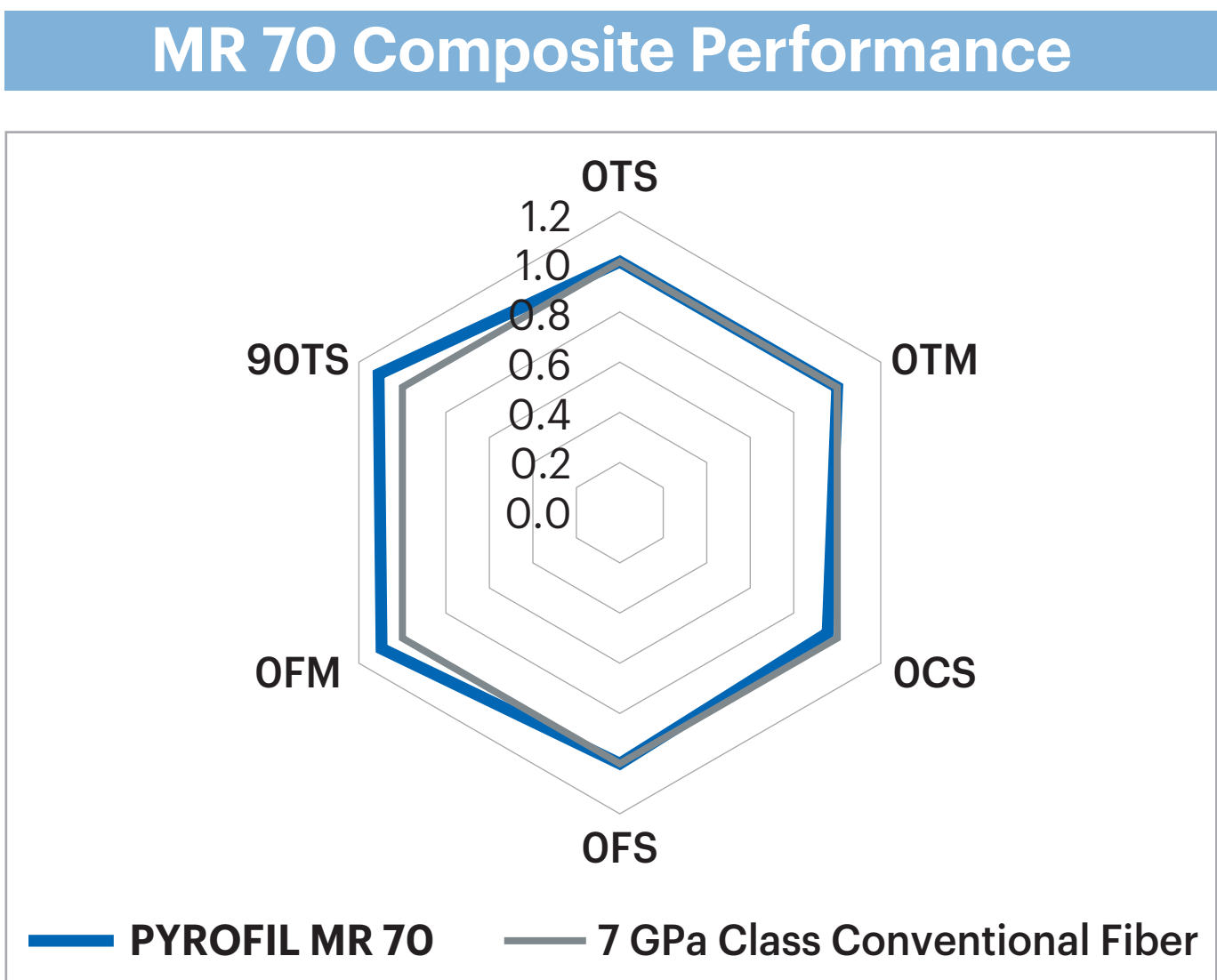
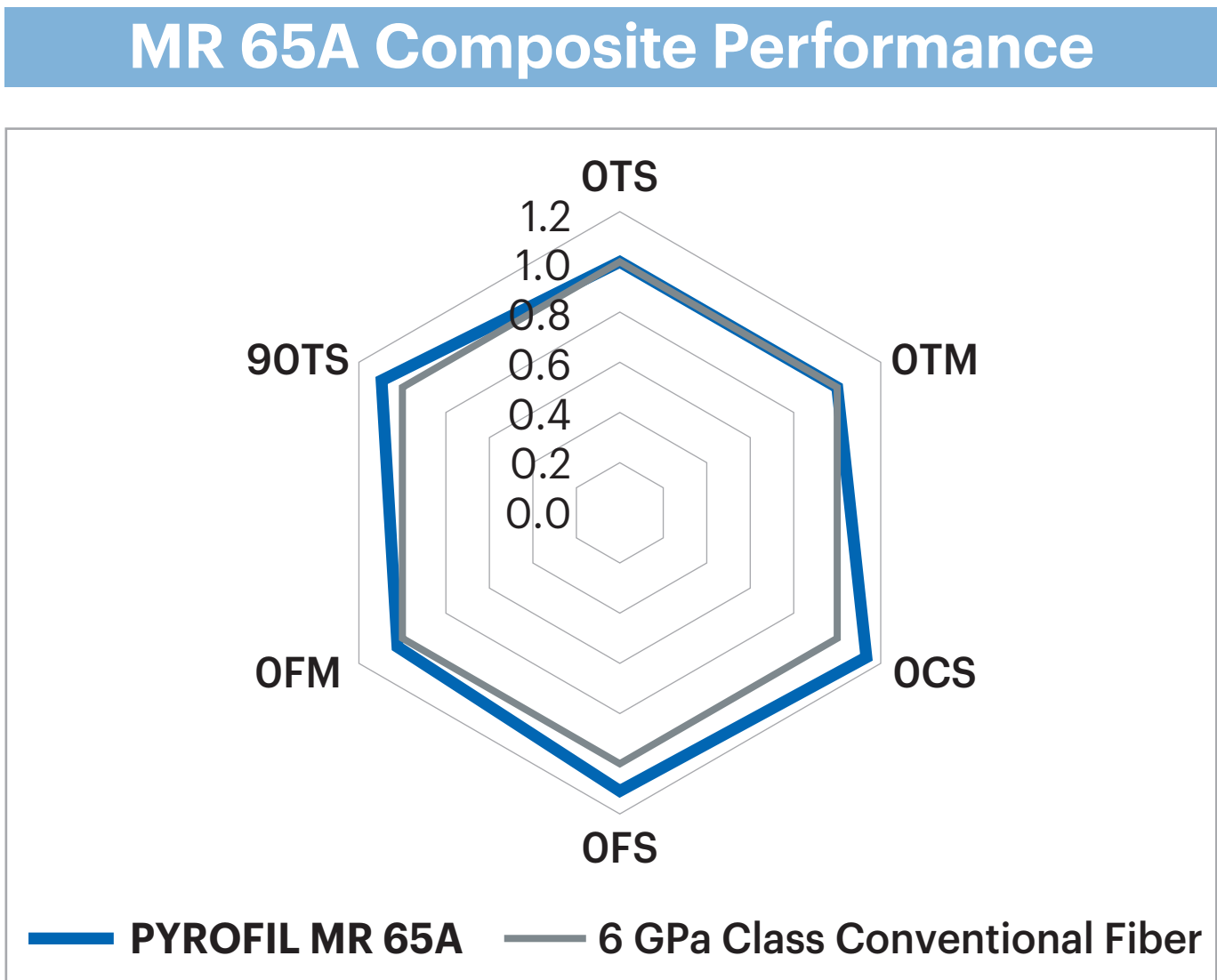
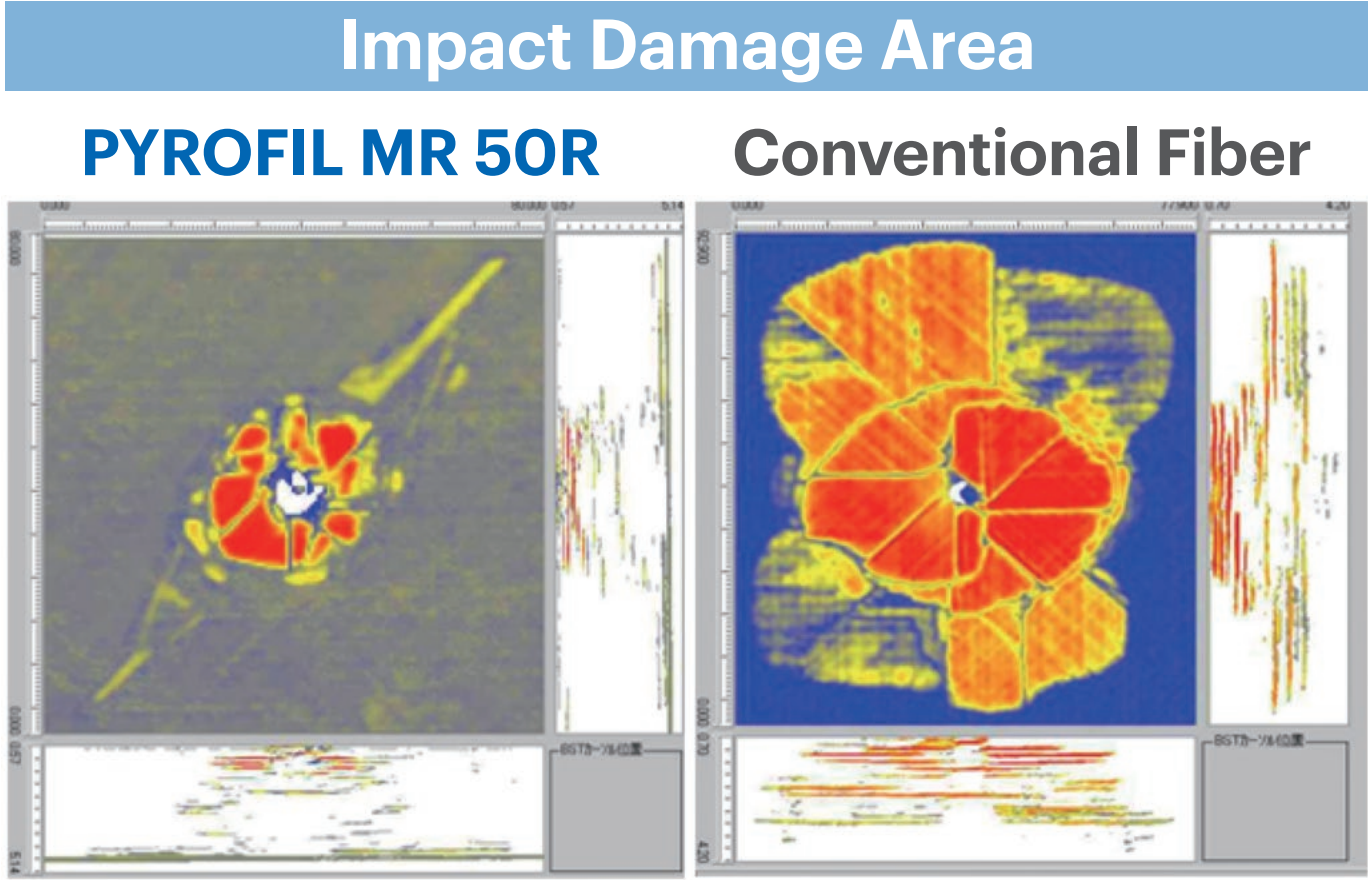
Manufactured in the USA and Japan, MR 70 delivers 7 GPa-class tensile strength and 324 GPa modulus, MR 70 enables the **ultimate lightweight composite structures** without compromising performance. Its exceptional strength allows **thinner laminate designs** and greater weight savings, helping customers unlock the next level of performance in Hypercars, premium bicycles, rocket motors, COPVs, and UAVs.

Composite Properties

PYROFIL™ IM-CF Laminate Properties in Epoxy Resin

Property	Cured with epoxy at 130 °C						Cured with epoxy at 180 °C					
	US Units			SI Units			US Units			SI Units		
	MR 70 12P	MR 65A12M	MR 50R12M	MR 70 12P	MR 65A12M	MR 50R12M	MR 70 12P	MR 65A12M	MR 50R12M	MR 70 12P	MR 65A12M	MR 50R12M
0° Tensile Strength	509-ksi	480-ksi	448-ksi	3510-MPa	3310-MPa	3090-MPa	455-ksi	433-ksi	396-ksi	3140-MPa	2990-MPa	2730-MPa
0° Tensile Modulus	26.8-Msi	23.9-Msi	23.3-Msi	185-GPa	165-GPa	161-GPa	27.1-Msi	24.3-Msi	23.6-Msi	187-GPa	168-GPa	163-GPa
0° Short Beam Shear Strength (ILSS)	12.9-ksi	12.5-ksi	12.7-ksi	89-MPa	86-MPa	88-MPa	21.0-ksi	20.9-ksi	22.3-ksi	145-MPa	144-MPa	154-MPa
0° Compressive Strength	262-ksi	247-ksi	244-ksi	1810-MPa	1700-MPa	1680-MPa	287-ksi	281-ksi	281-ksi	1980-MPa	1940-MPa	1940-MPa
0° Compressive Modulus	24.2-Msi	21.5-Msi	21.3-Msi	167-GPa	148-GPa	147-GPa	24.5-Msi	22.0-Msi	21.2-Msi	169-GPa	152-GPa	146-GPa

Disclaimer: The values presented are typical reference data and are not guaranteed specifications. Actual performance may vary depending on material, processing conditions, and application.



Data for conventional product are derived from publicly available supplier literature. Values may vary depending on fiber grade and test conditions.