



## CHEMFILM® MR

**CHEMFILM® MR** is a family of films combining the chemical inertness and universal non-stick properties of PTFE polymers with maximum conformability and heat resistance. This product is specifically designed to be used in composite molding applications. CHEMFILM® MR is naturally isotropic, helping the film achieve superior elongation and drapability, crucial for complex composite molded parts. Due to the naturally inert properties of PTFE, after the composite molding process, MR film is able to release from resin systems such as PMR-15, polyimides, PEEK, and other high temperature resin systems.

Film Product	Elongation(%)	Max Temp. (°F)
<b>CHEMFILM® MR</b>	450	600
<b>PFA</b>	430	550
<b>FEP</b>	300	500
<b>PVF</b>	190	350
<b>ECTFE</b>	200	350
<b>Polyimide</b>	90	750

MR is available in 1 and 2 mil thicknesses. The product is also available in a wide array of colors including blue, purple/raspberry, red, white and natural. This product can also be perforated in various patterns, depending on your unique needs.

Compare the data shown for CHEMFILM® MR versus other materials typically used in composite fabrication in order to understand its superior performance, particularly for complex shapes and high temperature resins.

### Advantages

- Continuous service temperature range from -200 to 260°C (-328 to 500°F)
- Successfully used up to 315°C (600°F)
- Superior release properties
- High elongation and unmatched drapability yielding superior conformability for irregular shapes
- High temperatures performance for PMR-15, polyimides, PEEK and other high temperature resin systems

## CHEMFILM® Typical Physical Properties\*

Typical Properties	Test Method	Value	Units
<b>Mechanical</b>			
Tensile Strength	ASTM D-882	31.0 (4,500)	MPa (psi)
Elongation	ASTM D-882	400	%
Elastic Modulus	ASTM D-882	379 (55,000)	MPa (psi)
Yield Stress	ASTM D-882	9.65 (1,400)	MPa (psi)
Resistance to Tear Initiation	ASTM D-1004	3.4(500)	MPa (psi)
Propagating Tear Strength	ASTM D-1938	0.045(0.10)	kgF(lbs.)
Bursting Strength	ASTM D-774	0.51(75)	MPa (psi)
Dimensional Stability	30 Min 500°F	3% Shrinkage Max	
Coefficient of Linear Thermal Exp.	ASTM D-696	5.5 x 10 <sup>-5</sup>	in./in. °F
Continuous Service Temperature		-188 to 260 (-400 to 500)	°C (°F)

\*Represent typical performance properties and should not be used for specification purposes

Contact your Saint-Gobain Performance Plastics representative for more information.



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