

**Industrial Uses**

**TYPE**

FluoroGrip® - M fluoropolymer film is manufactured from a new TFE/perfluoromethylvinylether, semi-crystalline thermoplastic fluoropolymer designed specifically for high temperature applications in chemical processing applications. FluoroGrip® - M film is a clear, transparent product that can be that sealed, thermoformed, welded, metallized, or laminated with a wide variety of materials.

FluoroGrip® - M film offers a combination of excellent dielectric properties across a wide temperature and frequency range, high chemical and stress crack resistance similar to PFA, a continuous service temperature of 300 – 445°F (depending upon adhesive used) and the highest clarity of any fluoropolymer film.

FluoroGrip® - M is available standard with an advanced pressure sensitive adhesive (PSA) of acrylic or high temperature resistant silicone PSA. Special chemical resistant adhesives are available. Consult Integument Technologies for specific material recommendations.

FluoroGrip® - M is available with either a single-sided or double-sided surface plasma modification treatment.

**INTENDED USE**

The combination of high chemical resistance over a wide range of environments and high temperature resistance make FluoroGrip® - M film an ideal component for tank linings, secondary containment and splash-and-spill environments where the most aggressive chemicals and high temperatures capabilities are demanded. The high clarity/low haze structure provides excellent performance in applications such as exterior ultra-high-performance paint replacement, secondary containment and UV protection in outdoor applications.

**Technical Data**

**PHYSICAL PROPERTIES**

**General**

	ASTM Method	Metric Value	Metric Units	English Value	English Units
Specific Gravity	D-792	2.15		2.15	
Yield (1mil film)		18	m <sup>2</sup> /kg	90	ft <sup>2</sup> /lb
Flammability	UL-94	V-0		V-0	
Water Absorption		<0.03	%	<0.03	%

Available Thicknesses (Film Only; Not Including Adhesive)	2 mil, 5 mil, 10 mil, 20 mil
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**Mechanical**

	ASTM Method	Metric Value	Metric Units	English Value	English Units
Tensile Strength @ Break	D-882	24-30	MPa	3500-4375	psi
Elongation @ Break	D-882	300	%	300	%
Fold Endurance (M.I.T.)	D-2176	6000	cycles	6000	cycles

**Electrical**

	ASTM Method	Metric Value	Metric Units	English Value	English Units
Dielectric Strength, 1mil	D-149	196	kV/mm	5000	V/mil
Dielectric Constant, 1kHz	D-150	2.00		2.00	
Dissipation Factor, 1kHz	D-150	<0.0003		<0.0005	

**INTENDED USE (cont...)**

The high temperature resistance and non-wetting surface of FluoroGrip® - M make an ideal component material for use as a high temperature film and lining for OEM composite manufacturing.

Single-side modification makes the material suitable as a weldable lining when low surface energy is demanded.

Double-sided treatment is especially useful when installations require seams, overlaps or the application of chemical resistant coatings or top toppings. The double-sided modification makes it an ideal material for pipe wraps and tapes and immersion linings. The modification also creates a superior surface for use as a chemical and temperature resistant underlayment or membrane where the application of chemical resistant toppings permits its use in traffic and secondary containment lining applications.

**NOTE**

Refer to FluoroGrip® installation manual and instruction guide for the use and installation of FluoroGrip® films, membranes and lining systems.

**PHYSICAL PROPERTIES (cont...)**

**Thermal**

	ASTM Method	Metric Value		Metric Units	English Value		English Units
Melt Point	D-3418	280-290		°C	536-554		°F
Continuous Service Temperature *		<b>A</b>	<b>S</b>	°C	<b>A</b>	<b>S</b>	°F
		150	234		300	450	
Limiting Oxygen Index	D-2863	>95		%	>95		%
Degradation Temperature *		<b>A</b>	<b>S</b>		<b>A</b>	<b>S</b>	°F
		164	262		325	500	

**Optical**

	ASTM Method	Metric Value	Metric Units	English Value	English Units
Haze	D-1003	1.341-1.347	%	2.5-3.5	%

\* **A** = Acrylic Adhesive  
 \* **S** = Silicone Adhesive

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