



Fluoropolymer Linings and Coatings

Technical Data

FluoroGrip® – M (MFA)

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), superior release properties 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.

Uses

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 ² /kg	90	ft ² /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, 1 mil	D-149	196	kV/mm	5000	V/mil
Dielectric Constant, 1 kHz	D-150	2.00		2.00	
Dissipation Factor, 1 kHz	D-150	<0.0003		<0.0005	

Integument

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Industrial Uses

Uses (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, maximum temperature stability and chemical stability 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 high temperature 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 uses. The superior release properties provide the most non-stick high temperature film available.

Note

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

Certifications

- FluoroGrip® – M is designed to meet the requirements to comply with the FDA's Register of Food Additive Regulations.

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Technical Data

Physical Properties

Thermal

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

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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