

PRECIDIUM™ 850D-FR

DESCRIPTION

PRECIDIUM™ 850D-FR Membrane is a **fire resistant**, zero VOC, high-performance polyurea elastomer designed to provide a durable, and fire resistant membrane for applications where fire resistance is required. It is a fast-set system for fast “return-to-service”.

The **PRECIDIUM™ 850D-FR** is applied with two-component, high-pressure spray equipment metered 1 to 1 by volume.

PROPERTIES OF CURED PRODUCT

Mix Ratio	1:1 (Volume)
Resin Viscosity (23°C)	1800-3600 cps
ISO Viscosity (23°C)	700-1400 cps
Gel Time	15-30 seconds
Tack Free Time	4-5 minutes
Recoat Window	0-2 hours
Shore D Hardness	52 after 24 hours
Elongation	ASTM D412: 200%
Tensile Strength	ASTM D412: 1300 psi
VOC	Zero

FEATURES

- Flame resistance.
- Excellent abrasion resistance.
- Highly resistant to impact over wide temperature range.
- Resistant to cracking under high flex conditions.
- Remains flexible at low temperature.
- Resistant to water and a wide range of chemicals.

STORAGE

Store in a cool and dry place for product integrity. Store in tightly sealed containers to protect from moisture and foreign materials.

AVAILABILITY

PRECIDIUM™ 850D-FR is packaged in 52.8 US Gallon drums (200 Liters).

PRODUCT SAFETY

SDS is available upon request.

INSTRUCTIONS

For application use a regulated high-pressure proportioner (1:1) and spray gun system capable of producing a minimum of 2000-2500 psi (ie: Graco EXP2/HXP2/HXP3). Thoroughly mix RESIN for 45 to 60 minutes prior to use. To ensure adequate mixing is achieved, a Dynamix Series MMX Drum Mixer or similar is recommended. This will re-suspend and maintain product uniformity.

Mixer Specifications:

- Drive: Air Motor 3 hp (½ hp @ 300rpm)
 - Mount: 2" Bung Mount (Aluminum)
 - Shaft: Shaft Assy. 3/4" x 28" Long Shaft (304 SS)
 - Two Impellers: Impeller Assembly Fixed 8" Diameter
- Preheating RESIN may be necessary to achieve uniform mix. Check that no residue is left on bottom of drum after mixing to ensure performance of cured product. This is achieved using a band heater or recirculating the material through the machine with the heaters set to 140° F. Target RESIN temperature before spraying is 100° F or above.

Recommended Heat Settings:

Line/Pre-Heaters	150° - 160° F
Hose Heat	150° - 160° F

Recommended Pressure Settings: 2000-2500 psi

Recommended Gun: Fusion AP

Recommended Tip: AR4242/AW3939

Apply only to properly prepared substrate. Apply first coat at less than 10 mil and allow to become tack free before continuing. Apply following coats at 20 mil per coat and allow surface to become tack free before application of subsequent coats. Spray with uniform motion and allow 50 to 75% overlap.

OTHER

Recommendations for the use of our products are based on the specifications of this technical data and the test results published herein. Manufacturer and seller are not responsible for results where the product is used under any conditions outside those specified or beyond our control. The purchaser of this product must rely on his own judgement in determining suitability for his purpose, and in applying directions as to handling and use specified herein. Quantum Chemical makes no warranty, expressed or implied, except that if this product proves on inspection to be defective, Quantum Chemical will replace such quantity of the product proven to be defective or refund the purchase price of defective product. Labour costs and other consequential damages are hereby excluded. No representative or purported agent of Quantum Chemical has the authority to change this warranty. The information contained herein is subject to change without notice. If in doubt, contact your Quantum Chemical Rep for current Technical Data Sheet (TDS).

PRECIDIUM™ 850D-FR

Physical Properties @ material thickness of 60-100 mils	
Tensile Elongation: ASTM D412	200%
Tensile Strength: ASTM D412	1300 psi
Tear Strength: ASTM D624	400 pli
Shore D Hardness: ASTM A2240	52
Gel Time/Tack Free	15-30 seconds/4-5 minutes
Solids by Volume	100%
Abrasion Resistance: ASTM D4060 CS-17	25 mg.wt. loss/1000cycles
Abrasion Resistance: ASTM D4060 H-18	204 mg.wt. loss/1000cycles
Slip Resistance: ASTM C-1028	>0.5
Adhesion: ASTM D-4541	>500 psi
ASTM E-648: Critical Heat Flux of Floor Covering	
Maximum Burn Length (Inches)	11.23
Average Critical Radiant Flux (W/cm ²)	0.77
ASTM E-162: Surface Flammability of Materials Using a Radian Heat Energy Source	
Average Flame Spread (I _s)	9.29
ASTM E-662: Specific Optical Density of Smoke Developed	
D _s @ 1.5 min. (average) Non-Flaming	0.5
D _S @ 4.5 min. (average) Non-Flaming	12.3
D _S @ 1.5 min. (average) Flaming	1.2
D _S @ 4.5 min. (average) Flaming	20.2
SMP 800-C: Toxic Gas Generation (ppm):	
CO (average)	4
HCN (average)	< 1.0
HCL(average)	1
HF (average)	< 1.0
SO ₂ (average)	< 1.0
NO _x (average)	1