

sti[®] Seamless Technologies, Inc.

Flexible Epoxy Membrane (FEM)

Product Data

1. Product Description

Basic use

SeamTek[®] Flexible Epoxy Membrane is a two component 100% solids, low-odor, low viscosity, low VOC resin that chemically cures to form a flexible membrane sheet over flooring substrates. It has been specifically designed to provide a 135 % stretch and to serve as an aid in bridging minor crack movement. It can be used as a “slip sheet” beneath epoxy flooring systems or as an integral component in waterproofing systems. It is recommended that an epoxy primer be used in conjunction with this product.

Features and benefits include:

- No amine blush – no frosting
- Self leveling
- Low foaming
- Good workability – easy to spread
- 100% solids – solvent free
- Low VOC
- Low odor
- Low flammability
- Compatible with epoxy resins and a wide range of aggregates

The STI SeamTek systems are composed of resins and aggregates which utilize the best available technology for safety and performance. All products and systems are extensively field tested prior to use on SeamTek projects.

Composition and Materials

SeamTek Flexible Epoxy Membrane is a chemical curing, two component, 100 % solids epoxy product.

Sizes

The binder resin and hardener are packaged in 5 U.S. gallon (18.9 liter) pails.

Limitations

SeamTek FEM is used to bridge moving cracks or joints but may not be effective in situations of extreme horizontal movement such as expansion joints. FEM is not

recommended for remediation of lateral rotation joint movement. See STI Technical Manual System Specifications for details. Installation conditions should be between 65°F minimum and 80°F maximum and relative humidity below 80%. Lower temperatures will extend cure time and higher temperatures will reduce pot and work life.

Storage and Handling

Because FEM has a flash point above 200°F (93°C), transportation, storage and handling are less restricted. The binder resin is freeze/thaw stable, which allows flexibility in storage of the product, on or off site.

Product Health and Safety Information

Refer to container labels and Material Safety Data Sheets available from STI for health, safety and environmental information. If necessary, call STI at (800) 666-6216.

Applicable Standards

STI SeamTek FEM has been tested in accordance with American Society for Testing and Materials (ASTM) methods. Refer to Table 1 on page 1 for more information. The USDA and FDA no longer regulates resins used on floors, walls, and ceilings in food process areas, since the surfaces are not intended for food contact.

Surface Preparatory Work

Preparatory work must be done in accordance with

Table 1 Typical Physical Properties

Property	Measuring Standards and Conditions	Results Part A/Part B
Specific Gravity	ASTM D 70, Fisher #3-247 pycnometer	1.06
Weight +/- 0.4 lbs./gal.	ASTM E 201	N/A
Non-volatile Content	ASTM D 1353, 18 hrs. at 200°F (93°C)	100%
Viscosity, cps	ASTM D 1475 77°F (25°C)	Self-leveling
Flash Point, TCC minimum	Seta Flash	Greater than 200°F (93°C)
Solvent Odor	ASTM D 1296	Extremely low
Flexibility		135% Stretch

procedures described in STI Technical Manual.

Mixing

Caution, containers used to measure FEM Resin and Harder must be marked appropriately and only used to measure the indicated component. Container used to mix both resin and hardener must be cleaned or changed after mixing each batch to avoid residual material affecting viscosity and cure rates.

Measure both parts by volume 2 to 1 into plastic marked containers. Pour resin and hardener into a separate container and agitate using a jiffy paddle and low speed drill (400-600 rpm). Agitate for 2 minutes, and then scrape sides of container and mix for an additional minute. Avoid generating air bubbles and foam. Consider mixing small batches to reduce potential waste. To avoid exothermic reaction in mixing container, do not let mixed components sit in container. Immediately, either pour the mixed epoxy binder resin onto the floor to be coated or thoroughly mix with aggregate and then pour onto floor. Spread or finish material according to application instructions contained in STI Technical Manual.

3. Warranty

STI Flooring Systems are installed by STI Associate Contractors and are available with the STI Single Source Limited Warranty for Labor and Material. This Product Data Sheet is for your information and is neither a contract nor a product warranty. Your installation contract is provided by your STI Associate Contractor. STI's warranty to you is made solely in the STI Single Source Limited Warranty for Labor and Material. Contact your Associate Contractor for the specific warranty document.

4. Technical Service

Call your STI representative for assistance.

Table 2 – Typical Performance Properties

Property	Measuring Standards and Conditions	Binder Resin Results Only See Note 1 below
Drying time	ASTM D 1475 77°F (25°C)	To Touch: 8 to 12 hrs. max. To complete: 24 hrs. max.
Hardness (indentation)	ASTM D 2240 Rex D Model 1700	65-70 resin only 80-85 with aggregate
Elongation	ASTM D 638	Less than 0.1%
Tensile Strength	ASTM D 638	4500 psi (31 MPa)
Water Absorption	ASTM D 570-95	Less than 0.2%
Indentation Resistance	Mil. Std. D-3134	Zero
Water Vapor Transmission	ASTM E 96-94	Less than 0.10 U.S. perms
Weathering Resistance	ASTM G 26 Type B, BH, 300 hrs	Slight Yellowing
Abrasion Resistance	ASTM C 501, CS-17 Wheel, 1000 rev. with 1000 gram weight	Less than 0.1 grams weight loss
Bond Strength to Concrete	ASTM D 4541	350 to 500 psi (2.4 to 3.4 MPa) epoxy holder fails
Electrical Conductivity		Non conductive
Flammability	ASTM D 635	Self-Extinguishing

1. For additional performance properties for binder resin with aggregate added (i.e. Tensile Strength, Flexural Strength, Flexural Modulus, Compressive Strength, Coefficient of Linear Expansion, etc.) refer to STI technical manual for specific system(s) selected.

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