



STYROCRETE®

Revised May 2017

TECHNICAL DATA SHEET

TWO COMPONENT POLYMER CEMENTITIOUS FOAM COATING



DESCRIPTION

Marbelite StyroCrete® is a specially formulated, high-strength cementitious polymer coating designed for direct application to concrete, cement block, ICF wall systems, and expanded polystyrene (EPS) architectural foam shapes. It can be combined with *Marbelite Mar-Flex Elastomeric Additive* to create a flexible, impact resistant coating, and can be applied to metal surfaces that have been primed with *Mar-Flex*.

BENEFITS/FEATURES

- ◆ Can be applied directly to foam shapes without the use of mesh or other adhesives
- ◆ Can be spray applied up to 1/8" thick in one application with no sagging or shrinking
- ◆ Conforms to any shape with minimal loss of detail
- ◆ Superior bond to various unpainted surfaces, such as, concrete or masonry
- ◆ Will not delaminate from any foam shape when properly applied
- ◆ Wide range of color options when using Marbelite's tinting system to integrally color **StyroCrete®** or by painting the finished product with *Marbelite Water-Based Epoxy or Stain Seal 500*



RECOMMENDED APPLICATIONS

Effective on applications such as...

- ◆ EPS Foam Shapes
- ◆ Cement Block
- ◆ ICF Wall Systems
- ◆ Concrete Floors
- ◆ Foam Trim Moldings
- ◆ Foam Columns
- ◆ Foam Signs
- ◆ Many other uses may be acceptable

CHEMICAL RESISTANCE (ASTM D2299)

*Sulfuric Acid, 10%.....	Unaffected
*Calcium Hydroxide, 10%.....	Unaffected
*Sodium Hydroxide, 10%.....	Unaffected
*Citric Acid, 10%.....	Unaffected
*Lactic Acid, 10%.....	Unaffected
*Gasoline.....	Unaffected
**Hydrochloric Acid, 10%.....	Unaffected
**Sodium Hydroxide, 10%.....	Unaffected
**Mineral Spirits.....	Unaffected
**Methyl Alcohol.....	Unaffected
**Lubricating Oil.....	Unaffected
***Sodium Hydroxide, 10%.....	Unaffected
***Citric Acid, 10%.....	Unaffected
***Lactic Acid, 10%.....	Unaffected
***Gasoline.....	Unaffected

- * Immersion time - 5 minutes
- ** Contact time - 15 minutes
- *** Immersion time - 7 hours

SPECIFICATIONS

Test Thickness:	6.0 mm (0.236 in.)	Comprehensive Strength (ASTM C-109):	
Test Density:	96.8 lbs./ft ³	1 Day	3950 psi
Thermal Conductivity (ASTM C 518-76):	0.290 (W/m K)	7 Days	5100
Thermal Resistance (ASTM C 518-76):	0.12 Btu/(hr ft ² °F/ft)	3 Days	4850 psi
		28 Days	5470 psi

Fire Retardant Test:
 UBC Std. 32-7, UL 790, ASTM E108 Class A

All tests were performed at 75° F. (24° C.)

TECHNICAL INFORMATION

Set Time (under normal drying conditions)	1 hour
Cure Time—Heavy Traffic	72 hours
Application Temp	40°F - 90°F
Pot Life	30 - 60 minutes
Coverage @ 1/8" (varies, depending on thickness)	50 sq. ft. / 50 lb. bag
Dry Appearance	Off White Cementitious Finish

Testing is accordance with procedures outlined in EPA Method 24, "Volatile Organic Content VOC of Paints and Related Coatings". The solids content was determined in accordance with ASTM D 5095 and the VOC was calculated in accordance with ASTM D 3960.

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StyroCrete

INSTRUCTIONS FOR USE

SURFACE PREPARATION: When using **StyroCrete®** on concrete surfaces, the surface must be deemed mechanically and structurally sound, completely clean, and dry. To achieve the above desired results, a mechanical grinding method should be performed to an approximate 50-100 grit profile to insure flatness of the substrate, to remove surface impurities, and to profile the surface of the floor to a CSP-2, as recommended by the ICRI Technical Guideline No. 03732. If mechanical means of preparation are not suitable, it is recommended to prepare the surface with a muriatic acid solution of 1 part acid to 4 parts water. Thoroughly rinse or pressure wash the surface clean to remove all acid solution. Note, it is recommended to test the pH level of the surface after rinsing and neutralize if necessary, using ammonia or baking soda and water. When applying to EPS foam, the substrate should be free of loose particles, dirt, dust and all other contaminants.

Air temperature should be no less than 40°F and not exceed 90°F; substrate temperature should be no less than 50°F and not exceed 90°. Applying Marbelite cements in extreme heat can cause early set-up and insufficient bond. Applying Marbelite cements in extreme cold can cause resin additives to freeze and improper curing.

MIXING: In a clean 5 gallon container, place 2.5 quarts (liters) of *StyroCrete® Polymer Bonding Resin Concentrate*, add 5 quarts (liters) of clean water. Carefully pour the contents of one bag of **StyroCrete®** cement into the liquids, mix well with a paddle or eggbeater mixer using a high torque, low speed, hand drill until well blended. Add additional water to lower viscosity and bring the material to a sprayable consistency. Usually, 1 quart is adequate. Add hot weather additive, such as *Marbelite Butterscotch Retarder* as required to prevent early setting. Use sparingly as an excess of retarder may cause the coating to sag. Normally 1-6 capfuls is sufficient for each 50 lb. mix of **StyroCrete®**.

COVERAGE RATE:

Thickness:	1/16"	3/32"	1/8"	1/4"
Coverage:	100 sq. ft.	75 sq. ft.	50 sq. ft.	25 sq. ft.
Skim/Base Coat:	200 sq. ft. per bag			

*Coverage rates may vary depending upon thickness, texture, and application method.

APPLICATION: Pour the mixed material into a hopper gun and prepare to spray. Adjust air compressor from 30 psi to 60 psi depending on the type of finish desired. As a general rule, a lower viscosity mixture sprayed at a higher air pressure will produce a smoother finish. Keep the nozzle about 18" - 24" away from the surface and apply in even, light coats until the desired texture has been achieved. Too much film thickness at once may cause the coating to run or sag. Normal thickness is 1/16" to 1/4", with a heavy coat being 1/8". Let the coating dry for about 12 hours at room temperature, or until fully dry, before sealing with any water based clear sealer or paint. For improved foam strength, apply a heavier coating, approximately 1/4", or utilize a higher density foam, 3 lb. rather than 1 lb., for example. Another method of increasing foam strength is to pre-coat foam with a fiberglass reinforced mesh, followed by a **StyroCrete®** finish coat. If applying over a polyurea coating, prime surface with a mixture of Mar-Flex and water (50:50 ratio) and apply by spray or brush. The primer coat must dry completely before the modified **StyroCrete®** material is applied. Note: Do not use any solvent based paint or sealer as it may melt or distort the foam. Always use water borne paints or sealers.

PLEASE NOTE: Applying material outside the suggested parameters may result in product failure. It is always recommended to test the product in a small, inconspicuous area (on the same concrete substrate) for desired results prior to application.

PRECAUTIONS AND LIMITATIONS

- ◆ This product will not freeze during storage, however, allow temperature to rise to 40°F prior to application. Do not use if rain is probable before the material has a chance to dry. Do not use if atmospheric conditions are foggy.
- ◆ This product requires the use of liquid polymer resin additive to function properly.
- ◆ It is recommended to use only *Marbelite Styro Bonding Polymer Resin Concentrate* and/or *Mar-Flex* with this product.
- ◆ It is not recommended to apply product over carpet, tile, or other types of floor adhesives.
- ◆ All new concrete must be cured for at least 28 days prior to application.
- ◆ Store in a dry environment at room temperature either on a shelf or pallet (not directly on the concrete), do not allow bags to get wet.
- ◆ When mixing this material wear proper protective-wear such as a respirator and goggles. Avoid inhaling sand and cement particles. Use with adequate ventilation.
- ◆ Do not allow mixed product to dry in unwanted locations.
- ◆ If applied thicker than 1/4" in a single application, shrink-cracks may occur.
- ◆ The applied thickness of the **StyroCrete®** and density of the foam determines the level of protection.
- ◆ An Application of 1/4" (6.35 mm) or thicker is recommended for exterior ICF walls. Most architectures and engineers will spec 4.3 oz fiberglass mesh be used within the **StyroCrete®** layers.
- ◆ Cornices and moldings fare well with 1/8" (3.17 mm thickness).

CLEAN UP: Use xylene. Dispose of containers in accordance with local and federal regulations.

PRODUCT REMOVAL: Dried, cured material may be removed with a commercial paint stripper or by using a diamond grinding method, sandblasting method, or similar mechanical action.

SHELF LIFE: Up to one year from manufacture date in its original, unopened container, stored at room temperature.

PACKAGING: Available in 50 lb bags.

SPECIAL NOTES: Always read all technical information, label, and SDS (MSDS) prior to use. This information can be found online or by calling customer service at the number below.

LIMITATION OF LIABILITY

Marbelite International Corp, "Seller" warrants that if any goods supplied prove to be defective in workmanship or material, that Seller shall replace them or refund their purchase price. This warranty is made in lieu of any and all other warranties expressed or implied. Before application, the User shall determine the suitability of the product for its intended use and User assumes all risks and liabilities whatsoever in connection therewith. Under no circumstances shall the Seller be liable for incidental, consequential, or other damages for alleged negligence, breach of warranty, or strict liability arising out of use or handling of this product. The sole liability of Seller for any claim arising out of the use or sale of defective product shall be for the User's purchase price.

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