TECHNICAL BULLETIN

Concrete
Coatings &
Floor Systems

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Kemiko® (Sta Crete) SS1120 High Solids Epoxy

Moisture Vapor Barrier System

Description

Kemiko SS1120, is a two-component polyamide amine cured epoxy, which is extremely surface tolerant. It can be used as an above or below grade vapor retarder placed on the negative side of the concrete substrate.

Applications

Kemiko SS1120 is applied to properly prepared concrete walls, masonry walls, and floors exposed to damp conditions. Kemiko SS1120 has over 25 years successful case history in waterproofing and sealing above grade and below grade walls and floors. Typical applications include theme parks, commercial buildings, parking garages, water treatment facilities, and decorative flooring applications as an adhesive primer. Test results were verified by an independent laboratory.

Physical Characteristics

VOC	<50 g/l Meets Final SCAQMD Rule 1113 (2008)	
Hardness Shore D	78	
Moisture Vapor Transmission (ASTM E-96)	MVT (g/h • ft²) 0.10	Perms (WVT/ΔP) 0.230
Percolation	0.002 inches ICC-ES Acceptance Criteria AC-39 (section 4.7)	
Hydrostatic Pressure	Excellent >700 lbs. PSI ASTM D-4541	
(ASTM C-1306)	@ 45 PSI no visible leakage	
Adhesion (ASTM C-297)	340 PSI (Concrete Failure)	
Tensile (ASTM D-412)	2985 PSI	
Elongation (ASTM D-412)	21.46%	
Volume Solids	95%	
Packaging	2 and 10 gal (premeasured kits)	
Flashpoint	>200°F	
Gloss	Medium Gloss	
Mix Ratio	1:1 (A:B) by Volume	
Pot Life	30 minutes at 70°F & 50% RH	
Dry Time	@ 70°F & 50% RH Recoat in 6-8. Full cure in 3 days	
Film Thickness	1-2 coats @ 7-10 mils/coat. 14-20 mils total DFT	
Coverage	160-220 ft² per gallon - per coat	
Thinning	None required. Not advised	
Primers	Self priming	
Topcoats (Must be top coated)	Kemiko SS1202, SS1202 UVR, SS3200, SS3300, SS3500, Kemiko (Sta Crete) SS1500 & Terra Fresco **Kemiko SS1600, SS2700, SS3400 & SS3700** ***All must wait 2 to 3 days before applying top coat***	

Sample Water Vapor Transmission Reduction — **Test: ASTM F-1869**

# of Coats	Before: Untreated Control (lbs/24h*1000ft²)	After: SS1120 (lbs/24hr* 1000ft²)	% Reduction	Before: Untreated Control (lbs/24hr*1000ft²)	After: SS1120 (lbs/24hr*1000ft²)	% Reduction
1 (7-10 mils)	10	3.5	65	—	—	—
2 (14-20 mils)	10	1.5	85	20	3	85%

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Surface Preparation
Concrete & Masonry —
All visible oil, grease, sludge, and any other contaminants shall be removed prior to any abrasive surface preparation and water washing. Surface shall be cured, dry and free from alkali stain and laitance. Prepare surfaces in accordance with SSPC-SP7 Brush-Off Blast Cleaning, Blastrac to achieve a 60-80 grit profile for long term adhesion and non-slip surface on floors. Repair all cracks, holes, and grout joints in an approved manner.

Wall & Surface Wetting —
In advance of the coating application to help allow for absorption of the applied material, spray water onto the surface to slightly dampen using a Hudson type sprayer.

Application Methods
Mixing —
Mix base component until a homogeneous mixture is obtained. Next, pour activator into base component and mix using mechanical jiffy mixer for 2-3 minutes. Make sure all material is thoroughly mixed. Pouring mixed material into a clean container and remixing insures complete reaction of epoxy.

Brush —
Use top quality bristle brush for best film properties.

Roller (Preferred Application) —
Lambswool or similar cover with phenolic core, ¼ - ½ inch nap thickness.

Spray —
Airless Spray – Use Graco “Hydra-Cat” 45:1 equipment or equal designed for plural-component, high pressure spray application. High-pressure equipment shall have the capability to apply product to a maximum 2500 psi from the proportioner to meet job conditions. Recirculating system and solvent purge equipment is necessary to keep material maintained and spray equipment cleaned during application delays and/or periods when exceeding product pot life.

Environment —
Apply between 60ºF – 100ºF and 5ºF above dew point.

Contact EPMAR for any additional application information.

Warranty
The following warranty is made in lieu of all other warranties, either expressed or implied. This product is manufactured of selected raw materials by skilled technicians. Neither seller nor manufacturer has any knowledge or control concerning the purchaser’s use of this product and no warranty is made as to the results of any use. The only obligation of either seller or manufacturer shall be to replace any quantity of this product, which is proved to be defective. Any claim of defective product must be received in writing within one (1) year from date of shipment. Neither seller nor manufacturer assumes any liability for injury, loss, or damage resulting from use of this product.

EPMAR
A QUAKER CHEMICAL COMPANY

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