Stef Barrier plus

(Cement membrane – Water-Barrier and Air-Barrier to waterproof the substrate)

1- Product description

STEF cementitious is a cementitious, two-component membrane. It is composed of a flexible, acrylic polymer and reinforced fibers to improve its strength. It is specially developed as an air barrier and water resistant membrane for indoor and outdoor substrates such as bathrooms,roofs ,swimming pools,water tanks,balconies and other substrates approved by STEF.

The minimum thickness required is 1/8 "(3.2 mm) .

2- Mixture

Mix a ratio of 35% of Portland cement type 10 and 65% by weight of ***STEF cementitious***. Make sure you always mix at high speed while you pour in the cement. Stir until completely dispersed and smooth. Wait 5 minutes and stir again for 1 minute before use.

Once dried, it provides a very low water absorption coefficient combined with good flexible strength that makes it an excellent two-component barrier against penetration of water and air.

3- Covered surface area

An 17 Lt container of ***STEF cementitious*** covers between 530 and 645 $ft.^2$ (50 and 60 m^2) for 1 layer.

4- Product properties

STEF cementitious is an easy-to-use product.

5- Installation

Surface preparation: the substrate surface on which the ***STEF cementitious*** protective membrane is applied must

be clean, dry and free of any dust, wax, grease, oil, rust and other products that will prevent good bonding prior to application.

Applying the product: Use a roll or brush to apply the ***STEF cementitious*** membrane. It can be applied to a maximum thickness of 1/8" (3.2 mm). Two layers of ***STEF cementitious*** are recommended.

During installation of the product: surface and ambient air temperature should be 5°C (41°F) or higher and should remain so for a minimum of 24 hours.

Drying: ***STEF cementitious*** coating drying time depends on the wind, ambient air and relative humidity. Under normal drying conditions 21°C (70°F) and 55% RH,

drying time is 24 hours

Cleaning: You should clean your tools with water while the ***STEF cementitious*** mixture is still wet.

6- Product storage

STEF cementitious should be stored at a temperature from 5°C (41°F) to 21°C (70°F) well-sealed and out of direct sunlight. Keep away form frost. The service life of the product is 1 year.

7- Transportation conditions

Regulated shipping name: not applicable.

TDG category: Not regulated.

Note: This product requires no special measures for international transport

Mixture properties	
Initial properties:	
pH initial / balanced	9.6 / 9.5
Viscosity (P.U.) initial/Balance	99/99
Viscosity (P.U.)	108
Properties after 10 Days at 60ºC. :	
pH	8.2
Viscosity (P.U.)	108

Performance of *STEF Cementitious* Mixed 35%: 65% with Portland Type 10 cement	
Test and method requirement	**Result**
Mixture density, g./cc	1.7
Workability	Very good
Duration of mixture in container Ambient temperature (20°C/68°F) 50°C *[1]	7 hours 4 hours
Hardness of thin coat*[2] When dry	Very good
Transmission of water vapor CCMC 5.3.4 / ASTM E96 *[3]	9,8 perms*[7]
Flexibility (1/16'' // 1.6 mm) Ambient temperature (20°C / 68°F) 4.5°C / 40°F	Successful 2'' Successful 2''
180 Adhesion pull-off on concrete*[4] **N/m (Newton/meter)** When dry Moist (1h / fog box)	2.75 N/m (C) *[5] 2.10 N/m (C)
Adhesion CCMC 5.3.3 / ASTM D1623 ≥0.1 MPa	0.94 MPa (Concrete)
Water pressure test*[6] 4 psi for 48h TTP-00141	Successful
Water absorption coefficient 72 hrs./ CCMC 5.4.4 / ISO 15148 ≤0.004 kg / (m^2 • $s^{1/2}$)	0.0035 kg / (m^2 • $s^{1/2}$)
Resistance to accelerated ageing CCMC 5.4.6 / ASTM G154 No negative effect 250 h	Successful

*[1] The ***STEF cementitious*** temperature and the cement have been balanced at a temperature of 50 ° C.
*[2] 24-hour curing time at ambient temperature.
*[3] According to ASHRAE 2009, a vapor-proof product should have perms ≥10 and a vapor-tight product should have the ≤0.1 perms.
*[4] One week curing time at ambient temperature.
*[5] Failure mode: C = cohesive break, A = adhesion failure.
*[6] 2 layers of the mixture were applied to the concrete block. Cure time was a week at room temperature. Tests conducted in accordance with the TTP-00141 method.
*[7] Tested at a thickness of 3.2 mm.

The instructions on the application and on its performance characteristics are based on information we believe to be reliable. They are provided to the best of our knowledge, but without guarantee, since the conditions and methods of use of our products are beyond our control.

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