Durex® Acrotel EC-A

Elastomeric Anti-Carbonation Protective Coating

Description

Durex® Acrotel EC-A Elastomeric Anti-Carbonation Protective Coating is a single-component, liquid-applied elastomeric, high-build acrylic protective coating. It is designed to protect concrete structures against moisture intrusion and carbon dioxide diffusion, preventing the carbonation of concrete and risk of corrosion of the reinforcing steel.

Uses

Durex® Acrotel EC-A Elastomeric Anti-Carbonation Protective Coating is used as a protective waterproof coating in vertical and horizontal applications over exterior above-grade walls, including concrete, brick, masonry, stucco, EIFS, stone, pre-cast, and exposed aggregate surfaces. Durex® Acrotel EC-A Elastomeric Anti-Carbonation Protective Coating will bridge hairline cracks throughout a wide range of temperatures.

Advantages

- Resistant to carbon dioxide diffusion
- Low VOCs, meeting LEED Green Building Rating System Credit 4.1
- Low odour, non-toxic
- Breathable water-resistant barrier
- Resistant to ultraviolet radiation and weathering
- Low Tg, long lasting, and capable of bridging hairline cracks at low and high temperatures
- Excellent dirt pick-up resistance
- Excellent colour retention
- Skins over in 30 minutes, and tack free in 2-4 hours
- Easy to apply, easy to clean

TECHNICAL DATA

PHYSICAL PROPERTIES		
Colour	Please see *Durex® Colour Selection Guide* for available colour options.	
Texture	Smooth finish	
Coverage	Coverage per coat (minimum of 2 coats required): 2.5 m^2/L (100 ft^2/gal) @ 16 mils (8 mils DFT) 4 m^2/L (160 ft^2/gal) @ 10 mils (5 mils DFT) **Coverage rate will vary according to the porosity and roughness of the surface being coated. Very rough or porous surfaces may require more than 2 coats to provide the required minimum 10 mils dry film thickness.**	
Carbon Dioxide Diffusion pr EN 1032-6	R-Diffusion-Equivalent Air Layer Thickness (m): Sc-Diffusion-Equivalent Concrete Thickness (cm): µ-Diffusion Resistance:	167 m DFT @ 400 µ (16 mils) 104 m DFT @ 250 µ (10 mils) 40 cm DFT @ 400 µ (16 mils) 25 cm DFT @ 250 µ (10 mils) 217, 000 DFT @ 400 µ (16 mils) 135, 000 DFT @ 250 µ (10 mils)
Resin Type	Acrylic Polymer	
pH Level	8.0 – 9.0	
Min. Film Forming Temperature	5°C	
Drying Time (55% Relative Humidity)	To touch/recoat @ 23 degrees C: 1 hour Fully cured: 7 days	
Low Temperature Flexibility	1/2” mandrel @ -34 degrees C 1/8” mandrel @ -26 degrees C	
V.O.C. (Without Water)	25 g/L (0.83 lb/gal)	
Reducer/Clean-up	Water	

PERFORMANCE PROPERTIES	TEST METHOD	RESULTS
Percent Solids	ASTM D7232-06	50-55% (vol.)
Water Vapour Permeance	ASTM E96 Method A ASTM E96 Method B	262 ng/Pa.s.m^2 (4.6 Perms) 1102 ng/Pa.s.m^2 (19 Perms)
Elongation	ASTM D2370	600% @ 23 degrees C
Recovery After 24 hr.		100%
Tensile Strength	ASTM D2370	507 psi @ 23 degrees C
Specific Gravity	ASTM D333	1.1 – 1.4 g/L (9.0 – 11.0 lb/gal)

Packaging

Durex® Acrotel EC-A Elastomeric Anti-Carbonation Protective Coating is packaged in 18.9 L (5 gal) and 3.78 L (1 gal) pails. This product is available in multiple standard colours. Custom colour matching can also be attained at an additional cost. Please refer to the *Durex® Colour Selection Guide* for all available colour options.

Storage Conditions

Store Durex® Acrotel EC-A Elastomeric Anti-Carbonation Protective Coating in a dry, vented, waterproof location, stacked off the ground, out of direct sunlight and other detrimental conditions. Store liquid materials as ambient temperatures above 5 degrees C and below 35 degrees C. **KEEP FROM FREEZING**.

Surface Preparation

Surfaces to be coated shall be clean, dry, structurally sound and free of debris or other materials deleterious to adhesion. New concrete and masonry mortar shall be allowed to cure for a minimum of 30 days with a compressive strength of at least 25 MPa (3, 625 psi) before coating. Clean surfaces with a wire brush and/or power washer to remove dirt, loose materials and debris. For best results, mechanically abrade surfaces. Allow surfaces to thoroughly dry prior to applications. Apply a coat of Durex® Dur-X-Cel Primer on new concrete surfaces, chalky surfaces, and/or surfaces which have been previously coated. Cracks between 0.79mm (1/32”) to 6mm (1/4”) wide are to be treated with Durex® EMC Knife Grade. Please consult your Durabond Technical Representative for cracks greater than 6mm (1/4”).

Application

THOROUGHLY MIX PRIOR TO USE. DO NOT DILUTE WITH WATER OR OTHER ADDITIVES.

Prepare a test patch to verify the effectiveness of the cleaning process, and to check product adhesion to the surface. Do not proceed with applications immediately prior to, during, or immediately after inclement weather conditions, or if adverse weather is anticipated within 24 hours after application. Apply materials at ambient and surface temperatures above 5 degrees C. Material can be applied using a brush, roller or sprayer.

ROLLER

Using a 19mm to 30mm (3/4" – 1 1/4") high pile roller, completely saturate the roller and keep it loaded with the coating to building the required thickness. Apply the coating with several passes, evenly spreading the coating over the entire substrate surface. Never dry roll. Cross roll, maintaining a wet edge, to achieve uniform thickness. Back roll in one direction for consistent appearance. Ensure that the final stroke of the roller is always in the same direction and with the same pressure applied to the roller.

SPRAY

Equipment is available for spraying all grades of Durex® Acrotel EC-A Elastomeric Anti-Carbonation Protective Coating. It is necessary to use a heavy duty sprayer designed for the application of coatings that contain sand particles. Contact equipment manufacturer for further recommendations. For smooth and fine grades, back rolling in one direction after spray application is recommended to achieve uniform texture and film thickness.

BRUSH

Application by brush is recommended only for small inaccessible areas, e.g., on touch-ups. Use only a nylon brush.

Carefully organize the work with sufficient available tradesmen in order to complete an entire section from natural break point to natural break point. **AVOID STOP AND START LINES WITHIN ANY ONE SECTION**. Apply Durex® Acrotel EC-A Elastomeric Anti-Carbonation Protective Coating in a minimum number of 2 coats, each coat to a minimum of 0.25 mm (10 mils) wet film thickness. The final total dry film thickness shall be a minimum of 0.25 mm (10 mils).

Conduct adhesion tests of cured coating according to ASTM D 3359, Measuring Adhesion by Tape Test Method A to verify positive adhesion to substrate.

DO NOT SUBSTITUTE NOR COMPENSATE DUREX® EMC WITH WATER OR OTHER ADDITIVES.

Cleaning

Regular cleaning will maintain these systems in serviceable condition. However, certain textures and service environments may require specific cleaning procedures. Contact a Durabond Technical Coatings Ltd Technical Representative for further information.

Limitations

Durex® Acrotel EC-A Elastomeric Anti-Carbonation Protective Coating is not recommended for use over previously treated surfaces without proper cleaning and preparation. Durex® Acrotel EC-A is not recommended for use when ambient, surface and material temperatures are below 5 degrees Celsius during application and curing period.

Health and Safety

Durex® Acrotel EC-A is non-toxic and non-flammable, however we recommend the use of rubber gloves when handling the product. Avoid contact with eyes and prolonged contact with skin. If contact occurs, flush immediately with water and seek medical advice if irritation occurs. Harmful if swallowed, do not induce vomiting. Drink 1-2 glasses of water or milk. Keep product out of reach of children. Please read our Material Safety Data Sheet for additional information.

Warranty

Durabond warrants this product is free of manufacturing defects, and will replace at no charge, provided it has been applied within 12 months of purchase, it has been installed for uses suitable for this product and in accordance with the manufacturer's instructions.

Technical Services

Technical support is available upon request at info@durabond.com. For the latest version of this data sheet, please visit our website at www.durabond.com, call toll free at 1-877-DURABOND (387-2266) or speak with your Durabond Technical Coatings Ltd sales representative.