

# Acrowall ESV Wall System

Water-drainage, mechanically attached Class PB EIFS incorporating a pre-formed drainage mat and a secondary air/weather barrier

## System Overview



## DESCRIPTION

Water-Managed Class PB Exterior Insulation and Finish System incorporating a rainscreen technology based upon the use of water-resistive barrier and optional channeled insulation board and/or drainage mat. Systems comply with ASTM E 2568 and E 2273.

Option 1- Tyvek StuccoWrap<sup>®</sup>, flat EPS insulation board, Acrocrete Base Coat, Acrocrete Reinforcing Mesh and Acrocrete Finish.

Option 2- Code compliant water-resistive barrier, grooved EPS insulation board, Acrocrete Base Coat, Acrocrete Reinforcing Mesh and Acrocrete Finish.

Option 3- Code compliant water-resistive barrier, BASF Drainage Mat, flat EPS insulation board, Acrocrete Base Coat, Acrocrete Reinforcing Mesh and Acrocrete Finish.

## USES

For exterior walls in new or retrofit light commercial and residential wood-frame construction when a water-drainage EIFS is desired or required to satisfy code issues related to drainage, and where high wind-load capacity is not a design consideration.

## ADVANTAGES

- Provides a drainage plane for directing incidental moisture out of the wall assembly
- Seamless wall surface provides high resistance to potential water intrusion from rain and other environmental sources
- Seamless exterior blanket of insulation provides high R values, lowers heating and cooling costs
- Cost-effective
- Potentially allows downsizing of HVAC systems
- Provides the ability to achieve any architectural style with unlimited design options
- Economical architectural detailing
- Does not require control joints
- Fade-, crack-, abrasion- and dirt-resistant finishes
- Multiple options for impact resistance improve functional design, ease of maintenance
- Wide selection of standard colors, custom colors, and finish textures

## DESIGN CONSIDERATIONS

### General

- Wind-load requirements may limit the use of this system. The design wind-load shall not exceed the system's allowable wind-load as stated in applicable code reports.
- ACROSTOP T is not approved for use over wood-based sheathings. Use ACROSTOP R over wood-based sheathings.
- Details shall conform with Acrocrete's recommendations and shall be consistent with the project requirements.
- Use high impact mesh for ground floor applications in high traffic areas.
- Consult the framing and sheathing manufacturer for design and application considerations.
- Do not use below grade; system must terminate a minimum of 8" above grade.

- Limit the use of dark color finish. Heat build up behind dark colors can adversely affect the performance of EPS insulation. Use of colors with a light reflectance value of less than 20% is not recommended.

### Expansion Joints

Required in the following locations:

- Where movement is anticipated (e.g., floor lines, canopies, carports, porte-cocheres, etc.)
- Where EIFS meets dissimilar materials (e.g., windows, doors, transitions to brick or other siding)
- Where substrate materials change
- At floor lines in wood frame construction where movement or cross grain shrinkage is anticipated
- At structural or existing expansion joints
- Expansion joint size and location per design as required for structural movement

### Horizontal Applications

Minimum slope: 1:2 with maximum width of 30.5 cm (12") [e.g. 15 cm in 30.5 cm (6" in 12") width].

### Substrate

- Maximum substrate design deflection is L/240.
- Consult the framing and sheathing manufacturer for design and application considerations.

### Water-Resistive Barrier

- Sheathing must be protected with either Acrostop R or another water-resistive barrier, installed per applicable building code and manufacturer's requirements.

### Sealants, Backer Rod, Flashing

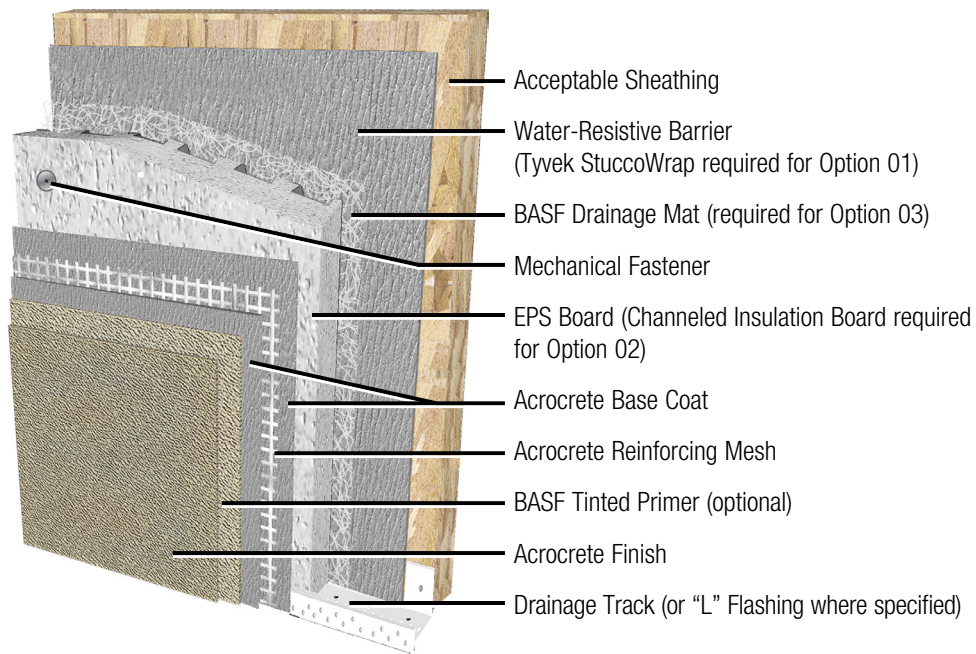
- Approved sealant installed with approved backer rod or bond breaker tape shall be used at all transitions between EIFS and other elements such as windows, doors, vents, penetrations, transitions to dissimilar elements, etc.
- Flashing at windows, doors, chimneys, transitions between EIFS and roof and at other points specified shall be installed in accordance with component manufacturer's instructions.

## BEST PRACTICES FOR INSTALLERS

### General

- All flashing should be installed per applicable code prior to the installation of ACROWALL ESV Wall System.
- A mock-up of the ACROWALL ESV Wall System system showing all components should be prepared using the same tools and skills that will be used in actual construction, and the sample should be kept at the job site during construction.
- Do not use below grade; system must terminate a minimum of 8" above grade.
- Protect dry (bagged) products from moisture. EPS insulation boards should be stored flat, out of direct sunlight.
- No additives are permitted to any components.
- Follow the application instructions for each component.
- Pail components must be kept at a minimum of 4°C (40°F) (10°C/50°F for AURORA TC-100, AURORA STONE and ALUMINA Finishes) during shipping and storage. A minimum temperature of 4°C (40°F)





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(10°C/50°F for AURORA TC-100, AURORA STONE and ALUMINA Finishes) is required during application of all components and until completely dried.

- Expansion joints are required: where Acrowall ESV Wall System meets other materials; where substrate materials change; at floor lines in wood frame construction where movement or cross grain shrinkage are anticipated; and anywhere else that movement is anticipated. Expansion joints should be a minimum of 1/2" or four times the anticipated movement as determined by a design professional.
- All substrates must be clean, dry and sound without planar irregularities greater than 1/4" in 10'.

### Insulation Boards

- All system terminations and penetrations must be back-wrapped with mesh and base coat.
- EPS board size is limited to 2' x 4'. The minimum thickness of EPS at any point on the wall can not be less than 3/4". Consider this when installing reveals. 1 1/2" EPS is recommended.
- Do not break reinforcing mesh in the reveal; offset 4–6" minimum. Do not align reveals with insulation board joints; offset 4–6" minimum.
- Offset insulation board joints from sheathing joints by a minimum of 16". Offset from corners of doors, windows and other penetrations by a minimum of 4".
- Insulation boards must be a single piece around corners of penetrations.
- Stagger joints in a running bond pattern offset a minimum of 24".
- Interlock corners.
- Prior to installation of the base coat, entire EPS covered wall must be completely rasped to remove high and low spots and to remove dust from the surface of the EPS.
- Use only mechanical fasteners specified by BASF Wall Systems and install according to specifications. Do not overdrive mechanical fasteners. They should recess by a maximum of 1/16" from surface.
- Always fill voids in insulation layer greater than 1/16" with slivers of insulation and not with base coat.

### Reinforced Base Coat

- Pre-spot each washer head on mechanical fasteners with base coat.
- ACROMESH 4 Reinforcing Mesh/INTERMEDIATE 6/INTERMEDIATE 12 must overlap a minimum of 2 1/2".
- STRONG 15/HI-IMPACT 20 mesh must not overlap; butt edges together. After STRONG 15/HI-IMPACT 20 mesh are embedded in base coat, a second layer of ACROMESH 4/INTERMEDIATE 6/INTERMEDIATE 12 and base coat must cover that layer.
- Install "butterflies" of Acromesh 4 at corners of all windows, doors and other penetrations.
- Install a second layer of reinforcing mesh a minimum of 4" on both sides of inside and outside corners.
- Mesh color should not be visible through the base coat.
- Special shapes must also be reinforced with base coat and reinforcing mesh.
- This system is not designed for horizontal applications. Always maintain a minimum slope of 1:2 up to a maximum width of 12".
- Protect work from precipitation for a minimum of 24 hours.

### Finish

- Use only stainless steel trowels.
- Avoid working in direct sunlight.
- Finishes should be applied with adequate man power, tools and staging to keep a wet edge.
- A primer tinted to the color of the finish is recommended prior to application of filled finishes.
- Do not run finish into joints.
- Do not quit in the middle of a wall; run to natural breaks.
- Do not use different batches of finish on the same elevation.
- Protect from precipitation for a minimum of 24 hours.
- Do not apply finish over sealants.

### LIMITATIONS

- Wind-load requirements may limit the use of this system.

### KEY UPGRADES AVAILABLE:

System upgrades can include the addition of high-impact resistant reinforcing mesh, specialty finishes, silicone enhanced textured finishes to improve dirt pick up and mildew resistance, and tinted primers to enhance final aesthetics.

### SPECIFICATIONS & DETAILS

The contents of this system overview are intended to provide the design professional information required to evaluate this assembly against specific project requirements. Further useful information to support the creation of a project manual such as a guide specification, product bulletins, and assembly details are available on the Acrocrete website at [www.acrocrete.basf.com](http://www.acrocrete.basf.com).

### TECHNICAL SUPPORT

For answers to questions or specific recommendations about this assembly, please consult our website at [www.acrocrete.basf.com](http://www.acrocrete.basf.com) or contact our Technical Services Department: Toll-free 800-589-1336.

### HEALTH & SAFETY

Follow good safety and industrial hygiene practices during handling and installing products and systems. Take necessary precautions and wear the appropriate personal protective equipment as needed. Read material safety data sheets and related literature on products before specification and/or installation.

### WARRANTY

Refer to the Acrocrete *EIFS, Air/Water-Resistive Barrier and Coating Warranty Schedule* for specific information about this product/system.

BASF warrants this product to be free from manufacturing defects and to meet the technical properties on the current Product Bulletin, if used as directed within shelf life. Satisfactory results depend not only on quality products but also upon many factors beyond our control. **BASF MAKES NO OTHER WARRANTY OR GUARANTEE, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO ITS PRODUCTS.** The sole and exclusive remedy of Purchaser for any claim concerning this product, including but not limited to, claims alleging breach of warranty, negligence, strict liability or otherwise, is shipment to purchaser of product equal to the amount of product that fails to meet this warranty or refund of the original purchase price of product that fails to meet this warranty, at the sole option of BASF. In the absence of an extended warranty issued by BASF, any claims concerning this product must be received in writing within one (1) year from the date of shipment and any claims not presented within that period are waived by Purchaser. **BASF WILL NOT BE RESPONSIBLE FOR ANY SPECIAL, INCIDENTAL, CONSEQUENTIAL (INCLUDING LOST PROFITS) OR PUNITIVE DAMAGES OF ANY KIND.**

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