Technical Bulletin 2
Version 1.2

Technical Bulletin

EIFS Council of Canada/ (416) 499-4000

EIFS Trim and Mouldings – Design and Installation

Individual Highlights:

EIFS cladding provides great aesthetic advantages in terms of flexibility in colour, shape and texture. EIFS-clad buildings allow the display of watertables, keystones, quoins, arches, and cornices, creating façade depth and facilitating the intended architectural design.

EIFS trim and mouldings (i.e., decorative profiles, shapes, and mouldings) are influenced by exposure, safety and/or structural considerations.

Materials

EIFS trim and mouldings typically consist of an expanded polystyrene (EPS) core, covered by a polymer-modified cement base coat with integral glass fibre reinforcing mesh. EIFS trim and mouldings can be finished with a number of architectural coatings, typically acrylic-based latex finishes, applied by trowel, spray, or roller. Once solely a field-applied element, prefabricated EIFS trim entered the market in the early 1990s and enabled form mimicking of other more traditional trim elements (e.g., architectural stone and wood millwork) without the associated cost.

Fire Safety Considerations

The chief concern about EIFS trim with respect to fire safety is the EPS core of the profile, since it is a foam plastic. Of primary importance is that the insulation must be completely encapsulated with the base coat. Further, NBC articles 3.2.3.7, 9.10.14.11, or 9.10.14.13 may limit the proximity of EIFS trim on walls required to be of non-combustible construction.

There is no criteria in the Code that deals with this question directly, however, good judgment and discussion with the local building official within the particular municipality should serve to meet current Code intentions.

At present, EIFS trimwork is not listed by Underwriters Laboratories Canada (ULC) or Intertek Testing Services (ITS).

It would be prudent to apply similar principles to EIFS trim and mouldings as for any other EIFS assembly (i.e., backwrapping).

If a moulding is provided, it could be interpreted as a minor combustible projection (in non-combustible construction), unless the moulding is quite large, hence increasing the amount (volume) of combustible material.

Operational and Maintenance Considerations

EIFS trim projecting out from the wall's vertical plane should be sloped a minimum rise over run of 6:12 for drainage (ASTM C1397, Standard Practice for Application of Class PB EIFS). The length of the slope must not exceed 300 mm, according to most EIFS manufacturer's specifications. However, it may be prudent to consider the following measures:

- As a rule, for mouldings that are often exposed to wind-driven rain, and snow or ice accumulation, the horizontal edge should be counter-flashed with metal, including a drip edge.
- There is another option to enhance the moisture resistance of low-slope projections, utilizing waterproof base coats (not to be confused with standard water-resistant EIFS base coats and elastomeric or high-content polymer finishes).

  Note: A waterproof base coat is typically low in vapour permeance and not recommended for large wall areas.
- Smooth textures are preferred to minimize dirt and mildew accumulation, and there are elastomeric coatings that can be applied to the base coat, foregoing the necessity of a textured finish coat and making the exposed surface more smooth.
- If there is an overhang in close proximity above the moulding, the sloping requirement could be reduced.
- Drip edges should be provided where possible. Most horizontal projections tend to accumulate dust and dirt, which then typically cause stains below as rainwater moves the dust and dirt down the façade.
- Select earth-tone colours to conceal staining, however it still may be necessary to clean the finish surface with detergent and soft brushing.
- If using a power washer for cleaning, take care to ensure water is not driven into the wall assembly or damaging to the finish coat – typically 1034 kPa (150 psi) is recommended from a spray distance of 1.8 m (6 ft).

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Installation

Specifications for EIFS trim should consider the following:

1. The type of adhesive and mechanical fasteners (when required to attach the EIFS trim to the wall cladding). Larger sections of EIFS trim typically require supplementary support systems (e.g., keyed wood blocking within foam core and/or mechanical fasteners).
2. If EIFS trim is joined, typically a flexible, durable adhesive must be used to join the profiles, as well as some type of joint reinforcement (e.g., fibre mesh in adhesive mix). If an intentional joint is introduced, the ends of each section must be properly backwrapped.
3. Attachment of EIFS trim on masonry veneer should incorporate a recess within the veneer face of 6.4 mm (1/4-in.) to allow the interface of the EIFS trim and masonry coursing to have a sealed/keyed joint.
4. The profiles required in the

architectural drawings may require shop drawings to be provided. These drawings should incorporate the measured profiles and acceptable tolerances for the plumb and plane of the wall assembly, as well as any supplementary support systems.

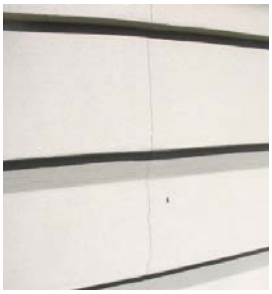
Finishing

Finishing of EIFS trim can be accomplished in a few ways:

- Conventional EIFS finish coat that is trowel or spray-applied; or
- EIFS coatings (compatible with the EIFS trim and mouldings) that is used with or without integral sand for a textured finish.

Note that coatings supplied by an EIFS manufacturer have been specifically formulated for application over alkaline cementitious surfaces, such as the EIFS trim and mouldings base coat.

Cracked joint in EIFS trim



Joints

Expansion joints and control joints should be installed in the EIFS trim where they exist in the substrate, and where the EIFS trim adjoins dissimilar construction. Larger mouldings may require expansion and control joints at more regular intervals than within the main EIFS cladding.

Back wrapping

Where required by the EIFS trim and moulding manufacturer, the following procedure should be employed for back wrapping:

- Pre-wrap insulation with mesh before installation;
- Ensure back wrapping (100 mm [4-in.] minimum) on all sides of EIFS trim.
- Ensure all end cuts (field or manufactured) are wrapped.
- Ensure pre-wrapped mesh is fully encapsulated in base coating adhesive (self-adhesive mesh is generally not acceptable).

Additional Limitations

- EIFS mouldings should never be used as steps.
- EIFS mouldings at parapets should have wood blocking installed at top exposed horizontal surfaces.

Technical Bulletins

This is one of a series of Technical Bulletins that the EIFS Council has produced to provide guidance concerning the building performance of EIFS Installations. New bulletins, as well as updates of existing bulletins, are issued periodically, as necessary.

The bulletins do not create regulations; rather they provide specific guidance for complying with the minimum requirements of manufacturer's recommendations.

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Spreading the Word

About the EIFS Council of Canada

The EIFS Council of Canada (ECC) was formed in 1987 to help focus attention and awareness on industry accepted practices and quality in the installation of EIFS claddings in the Canadian construction marketplace.

The development of an EIFS Quality Assurance Program (QAP) is expected to further enhance consumer protection through implementation of consistent guidelines and specifications for installers once its' development is complete and delivered to the marketplace.