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# Head Flashings at Window and Door Openings

Flashings at window and door openings can be a tricky task. Here's a breakdown of best practices.

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### Head Flashings at Window and Door Openings

Flashings, in conjunction with a water-resistive barrier, are used to collect incidental moisture that bypasses the exterior wall covering or cladding and provide a route for it to escape. Other than performance and prescriptive exceptions set forth by the codes, flashings and a water-resistive barrier are required, regardless of the type of building or exterior wall covering.

Model building codes, such as the International Residential and Building Codes, contain general sections for flashing and more specific provisions at fenestrations, such as window and door openings. To comply with flashing requirements around fenestrations, building codes typically provide options, such as the examples below, which give flexibility in terms of methods and materials. Depending on local codes and jurisdictions, the options and their hierarchy may vary from those shown:

- The fenestration manufacturer's instructions
- The water-resistive barrier manufacturer's instructions
- The flashing manufacturer's instructions
- The flashing method or design by the design professional
- Other approved methods

The perimeters of window and door openings are comprised of elements referred to as the sill, jambs, and head or top. How these elements are flashed and the products used depends on building code requirements, in conjunction with other factors, such as the element being flashed, project conditions, cladding material and thickness, substrate, material compatibility, cost, installation method, etc. Common flashing products include liquid membranes; fluid-applied, self-adhered or mechanically fastened sheet or roll goods; rigid products, such as PVC plastic and metal; or combinations of several products. Accessory pieces, such as sloped PVC plastic sill wedges (**Figure 1**) that promote drainage and pre-formed corners that conform to different geometries, are commonly used in conjunction with flashing products to ease or enhance the flashing process.



Figure 1 - Sloped PVC Plastic Sill Wedge

# What to Use

At the top or head of an opening, rigid material, such as PVC plastic or metal, is generally preferred while jambs and sills typically use a wider range of products. A head or drip flashing (**Figure 2**), which is integrated with a water-resistive barrier, has traditionally achieved collection and disposal of incidental water at the top of an opening.



Figure 2 - Traditional PVC Plastic Head Flashing

# How it Works

While alternative options exist, head flashings are commonly configured using one of several methods:

- 1. The head flashing extends beyond the jambs, which allow collected moisture to flow over the outermost edge of the flashing to the exterior and from the ends of the flashing to the water-resistive barrier to the exterior.
- 2. End dams or caps are incorporated into or added to each end of the head flashing (Figure 3) to capture incidental moisture within the head flashing, which provides a direct path to the exterior.
- 3. Both ends of the flashing are closed and wrapped over the top of the fenestration, which allows collected moisture to flow over the flashing edges to the water-resistive barrier and the exterior.

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Figure 3 – End Caps

Alternatives, such as a diverter flashing or combination diverter and head flashing embedded within the cladding (**Figure 4**), may also be options in some applications. Diverter flashings are typically installed horizontally and extend beyond the opening. The diverter is integrated with the water-resistive barrier, which provides a means for incidental moisture to be redirected to the exterior.



Figure 4 – Diverter and head Flashing. Image credit: Dryvit/Tremco CPG Inc

## What is it Made of?

In regards to material composition of diverter and head flashings, metal flashings may be available in sticks or straight lengths but often require custom fabrication, particularly if the project conditions require end dams, closed and wrapped ends, or to satisfy other unique conditions. Custom metal flashings add complexity and cost since the flashing needs to be formed or shaped with tin snips and/or sheet metal brake.

# **Benefits of Flashings**

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Some of the many benefits of PVC plastic include ease of installation, not corroding or rusting, availability in various configurations and dimensions, cost-effectiveness and being safe to handle, as well as colors to complement surrounding building components. PVC plastics are typically available in 10-foot-long sticks or lengths that are easily cut on the job site with common tools, such as a utility knife or saw. Accessories, such as end caps or dams (**Figure 3**), can be field-installed with standard PVC adhesive to capture moisture within the flashing, which provides the most direct path to the exterior. PVC plastic trim manufacturers also offer other accessories, including built-in moisture seals, or backer rods and custom products for specialized applications.

# **Best Practices**

Below are general best practices for the installation of head flashings at openings, such as windows and doors. Refer to the applicable manufacturers and industry documents for additional and detailed information.

- The front edge of the flashing should be bent tight and counter-flash the fenestration.
- Rigidly fasten the flashing.
- Integrate the head and jamb flashing and lap the water-resistive barrier over the upturned leg of the head flashing.
- Flashings must be compatible with adjoining and adjacent materials.
- Slope the bottom edge toward the exterior.
- Seal between the bottom edge of the flashing and the fenestration.
- Provide a watertight seal between adjacent or adjoining flashing pieces.
- Incorporate end dams or caps for the most direct path for moisture to exit to the exterior.
- Provide a gap between the cladding and flashing to create a path for moisture to exit.

While there are exceptions, flashings are typically required at the top or head of openings, such as windows and doors. Although many types of flashing materials are available, rigid materials, such as those fabricated from metal or PVC plastic, are generally used to flash the top or head of an opening.



Bill Egan of the Bill Egan Group has more than 35 years of construction experience that includes product and system design, standards development, testing, building code compliance as well as claim investigation and resolution. He has held key technical roles with manufacturers of EIFS, stucco, air and water resistive barriers and architectural coating systems. Egan graduated from Roger Williams University with a BS in Civil Engineering, holds numerous patents, and participates in various industry associations. He also serves on ASTM committees related to stucco, lath, air/water resistive barriers and is the E6.58 subcommittee chairman for the Performance of EIFS.