A Brief History of Jamflash®

Jamflash® was invented to provide the building construction industry with a simple yet effective means for providing protection against moisture penetration at the jambs of window and door openings into both the back up wall and the interior of buildings with masonry exterior walls.

As the need for the flashing of window and door jambs became evident due to the damage caused to metal studs, wood blocking, sheathing and interior finished by moisture penetration at the joints between openings in exterior walls and the frames that filled them, many methods were been developed in order to deal with the problem. The first attempts involved extending the 15 # felt paper moisture barrier into the openings and hoping that both the felt paper would still be there when the frames were installed and that it would lay in place against the frame once the frame was installed. When it was realized that this method did not work, other methods involving flexible flashings were attempted. All of which have resulted in some form of failure.

PVC and copper fabric flashings were installed by mason and or waterproofing contractors with staples and mastic, left hanging into the opening to be pushed outward of the building face by the window contractor who then installed the window and then it was to be pulled into position by the waterproofing contractor, trimmed flush with the window or door frame and then caulked. The problem with the copper fabric flashings were that they are not compatible with sealants used to caulk the perimeter of the these frames. The problems with PVC flashings were that they were either not still in place or damaged by the time the window contractor installed the windows. Attachment methods involving screws and termination bars were instituted to solve the attachment problems, but they added costst and did not solve the other problems. In the spirit of productivity for profitability, the window contractor often ignored the state, or lack thereof, of the fabric flashings and installed the windows despite problems with the flashings. In many cases, the window contractor often added to the damage to the flashing or even removed it altogether. By the time the waterproofing contractor came to install the sealant, the flashing were either gone, severely damaged or lodged into the cavity so that even if the waterproofing contractor was conscientious enough to notice the unacceptable condition, there was little that could be done to remediate it. More often than not, the condition was ignored. When it was noticed and brought to the attention of the proper authorities, it was extremely expensive to repair and even harder to asses and blame for. Whether it be the developer, through a contingency fund, the installing contractor or the window contractor, significant costs and delays were incurred in order to remedy the situation.

Secondary sealant joints at the face of the back up wall were popular for a while until subsequent inspections revealed that the sealant material did not adhere to the moisture barrier or exposed edge of the back up or were not compatible with the damproofing on masonry back up walls. Means were taken to deal with he compatibility problem but it was also found that it was extremely difficult to apply such a bead and even more difficult to tool this joint to insure a proper seal once the frame had been installed. Inspection of such joint installations was nearly impossible to perform since the primary and secondary joints were installed concurrently and the logistics of performing such inspections led to serious inefficiencies and, therefore, significant costs.

Lately, some members of the industry have taken to detailing a jamb flashing system whereby a self adhering membrane consisting of polyethylene sheeting and rubberized adhesive would be installed from the jamb of the back up wall to the jamb of the masonry veneer. This system was designed to dam the cavity at the jambs of the openings, however, it did not provide a means to seal the joint between the back up wall and the frame in the opening should the sealant at the face of the frame fail. In addition, the manufacturers of these flashing products recommend a minimum of a three inch lap at vertical terminations. Since most frames are set back from the face of the masonry for architectural relief, the three inch lap (or adhesion in this case) was never realized. Also, moisture penetrating through the masonry veneer would come into contact with the adhesive material causing it to fail. Since the polyethylene face of the self adhering flashing was not compatible with sealants, the flashing could not be held in place by the sealant joint and the flashing would cease to adhere to the masonry, fall loose into the cavity along the outer edge and cease to create the dam it was intended to create.

In learning first hand of all the shortcomings of these systems through bearing much of the costs and aggravation due to them, the inventor of Jamflash® sought to develop a flashing system for window and door jambs with the following properties:

1.) It must be durable enough to withstand the rigors of the construction process.
2.) It must be able to withstand exposure to harsh chemicals such as acids used to clean masonry veneers and the solvents used in damproofing, waterproofing and sealants in exterior walls.
3.) It must be very easy to install.
4.) It must require as little multi trade involvement to achieve its purpose as possible.
5.) It must be easy to work with.
6.) It must be flexible yet have memory.
7.) It must both seal the joint between the back up wall and the frame and create an air dam.
8.) It must be cost effective.

With these objectives in mind, Jamflash® was created. The shape of Jamflash® allows for the spring action seal of the joint simply by installing the frame in the opening. It also provides protection for the exposed edge of GWB sheathing used in most back-up walls. The “ living hinge“ on the cavity face attachment leg allows for Jamflash ® to be collapsed for efficient shipping without the product losing its intended shape as well as providing a guide for easily removing the leg with a utility knife should Jamflash® be used on an existing building where this particular leg cannot be placed. The “vee notches“ on the tension leg were added to insure a straight cut in the trimming process to be performed by the installer of the sealant joint at the face of the frame.

Finally, the material to be used to manufacture Jamflash® had to be chosen. PVC, rubber, EDPM, santoprene, neoprene, elvaloy® and polypropylene were all prototyped. The properties and cost targets required led to the selection of polypropylene. It is used to fabricate car battery casings so it will withstand exposure to acidic compounds. It is used to fabricate gasoline containers so it will withstand solvents. It is flexible yet durable and withstands exposure to ultraviolet rays. We have been informed by experts in the plastics field that in the application that we intend to use it for, it should last forever.