



FIG 1 – COILED AUSSIE SWELL RED OUT OF THE BOX

Aussie Swell Red Waterstop General Applications

DESCRIPTION

Aussie Swell applications include both vertical and horizontal concrete construction joints, new to existing construction, irregular surfaces, and around through wall penetrations, such as plumbing and electrical conduit. Aussie Swell is designed for both hydrostatic and non-hydrostatic conditions. Aussie Swell is not designed, nor intended to function as an expansion joint sealant.

Aussie Swell is designed for structural reinforced concrete with a minimum of 2000 psi and requires full confinement.

Aussie Swell comes in three different sizes and shapes for various concrete thicknesses:

Waterstop	Cross-Sectional Shape	Roll Length	Min. Concrete Coverage	Min. Wall Thickness	Min. Slab Thickness
Aussie Swell Red	Rectangle	1"x3/4" & 16'4" Long	3"	8" (2 rows of reinforcement recommended)	8"
Aussie Swell Red S (Small Profile)	Half-Moon	3/4" x 1/2" & 33'6" Long	2"	6"	4"
Aussie Swell T (Special Order Item)	Trapezoid	1 1/4" x 1/2" & 20' Long	3"	8" (2 rows of reinforcement recommended)	8"

GENERAL INSTALLATION

Surface/Substrate Preparation

Surfaces should be clean and dry. Remove all dirt, rocks, rust, debris or other foreign matter that might inhibit the adhesive from bonding to the concrete. Do not install Aussie Swell in standing water.

Adhesive

Apply a ¼" continuous bead of Aussie Seal M along the substrate where Aussie Swell will be installed. Ensure proper concrete coverage will be maintained. Excessive amounts of adhesive will slow down the cure time.

Installation

After applying a continuous bead of Aussie Seal M at ¼": thick, remove the release paper, then firmly press the entire length of Aussie Swell onto the adhesive. For vertical and overhead applications, firmly press a minimum of 15 seconds to assure adhesion. Apply Aussie Swell within 10 minutes of adhesive installation; waterstop must be placed into adhesive prior to Aussie Swell skinning over and curing. Aussie Seal M may be applied to damp surfaces, but not in standing water.



FIG 2. - AUSSIE SWELL RED TIGHTLY BUTTED TOGETHER

Tightly butt coil ends together to form a continuous waterstop as shown in **Figure 2**. Place in maximum practical lengths to minimize coil end joints. Where required, cut coils with knife or utility blade and butt coil ends together. Pour Concrete. Do not overlap ends as shown in **Figure 3**.



FIG 3 - ENDS OVERLAPPING INSTEAD OF BUTTED. NON-COMPLIANT.

NOTE: Some conditions (freezing temperatures, damper surfaces, excessive Aussie Seal M placement) will influence the cure time of the Aussie Seal M, thus affecting the bond on the Waterstop. This can result in the Aussie Swell Red to float during concrete placement which can cause spalled concrete. Mechanical fasteners placed every 12" on center can be used to help hold the Aussie Swell in place during a concrete pour should the Aussie Seal M not be cured prior to the pour. Mechanical fasteners should not be used to secure product alone, but may be used only in conjunction with Aussie Seal M.

Limitations

Aussie Swell is not designed, nor intended to function as an expansion joint.

Aussie Swell should not be pre-hydrated by submersion or remain in contact with water prior to concrete pour. If the product exhibits considerable swell prior to confinement in the joint, it must be replaced with new material. In conditions where severe ground water chemical contamination exists, or is expected, consult with manufacturer for compatibility information and approval.



FIG. 4 - ALWAYS ENSURE PROPER CONCRETE COVERAGE IS MET TO PREVENT CONCRETE BLOWOUTS

Penetrations

Following the General Installation Procedures above, install Aussie Swell directly around all applicable single and multiple poured-in-place or sleeved pipe penetrations.

Single Pipe Penetration: Install Aussie Swell around outer diameter of the pipe. Aussie Swell shall be installed around all PVC pipes. See **Figure 6**.

Multiple Pipe Penetrations: Install Aussie Swell around each pipe, as well as around any block out box construction joint.

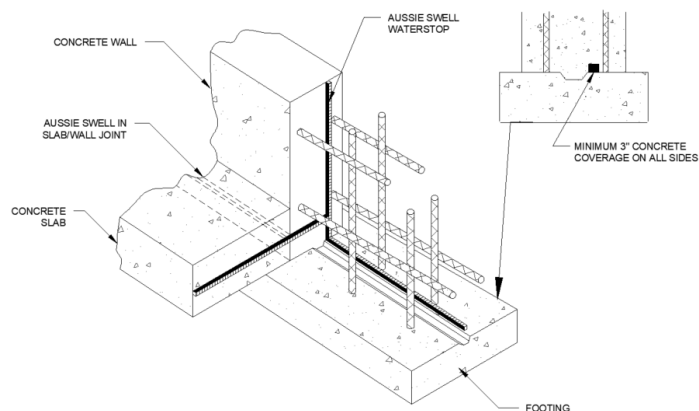


FIG. 5 - PROPER PLACEMENT OF AUSSIE SWELL RED

Pile Caps and Grade Beams

Following the General Installation Procedures, install Aussie Swell in all applicable concrete construction joints around or adjacent to pile caps and grade beams.

Install Aussie Swell around pile caps and grade beams above the layer (not contacting) of exterior waterproofing to establish a separate waterstop layer. Contour all I-beams extending outward from pile caps with Aussie Swell or encircle all metal reinforcement rods extending out of pile caps.

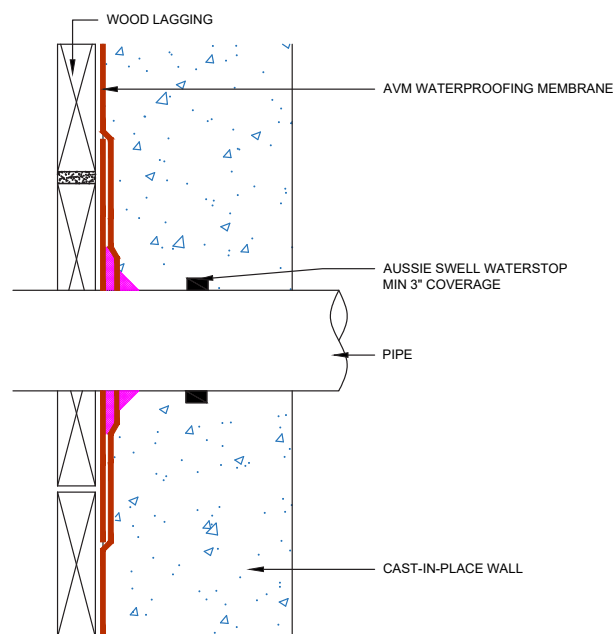


FIG. 6 - PIPE PENETRATION DETAIL WITH AUSSIE SWELL WRAPPED AROUND IT

Irregular Concrete Surfaces

Following the General Installation Procedures, install Aussie Swell to existing irregular concrete or stone surfaces.

Press Aussie Swell continuously against irregular surface, contouring all rises and depressions. Do not span cavities or cracks leaving a gap between the surface and the Aussie Swell. In special conditions it may be necessary to install Aussie Swell in an irregular path to circumvent deep depressions or cracks.

PREHYDRATION ASSESSMENT FOR AUSSIE SWELL RED WATERSTOP DUE TO EXPOSURE

Introduction – What Does Active Mean?

AVM's Aussie Swell Red is a hydrophilic strip waterstop composed of a formulated blend of sodium bentonite & butyl rubber. Being as it is formulated with sodium bentonite, the Aussie Swell Red is classified as an “active” waterstop meaning that it reacts to water/moisture by activating and swelling. This makes it particularly effective in sealing construction joints once it is confined entirely in concrete by swelling within its confinement and self-injecting into localized voids and minor fissures resulting in a strong replacement for the conventional passive PVC/Rubber waterstops.

As is the case with any active sealing product, there is a risk of hydration to the Aussie Swell Red prior to the encapsulation in concrete due to environmental and hydrostatic conditions. In a perfect situation, the Aussie Swell Red will only hydrate after it has been submersed in concrete. Often, this is not the case and pre-hydration will occur which can greatly impact the performance of the Aussie Swell Red and can call for it to be completely removed and replaced with new Aussie Swell. This Assessment Guideline is to assist in determining whether the Aussie Swell Red has reached a point of excessive hydration prior to the concrete coverage.



FIG. 7 – PRE-HYDRATED AUSSIE SWELL RED NEEDING REMOVAL

Exposure Limits & Guidelines

There are two criteria that should be reviewed during each scenario when Aussie Swell Red has become hydrated prior to concrete confinement to determine if the Aussie Swell is still good: **Activation & Adhesion**. Not every scenario of pre-hydration is alike. In the most extreme conditions, the Aussie Swell Red will remain submerged in standing water for a minimum of 7-10 days allowing the Aussie Swell Red to reach its maximum potential prior to coverage. Actual exposure scenarios are going to be less severe resulting in the Aussie Swell Red not reaching its maximum potential.

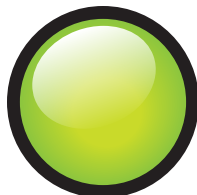
Activation: Aussie Swell Red can become partially activated prior to concrete coverage as it does not need to achieve maximum swell in order to be effective in sealing joints and fissures. To assess partially hydrated

Aussie Swell Red ensure there is not cracking along the corners and edges of the waterstop. The Aussie Swell should remain intact without major surface cracks. If the Aussie Swell Red can be compared to an alligator tail, the product has reached the maximum activation allowed prior to coverage and will need to be removed and replaced with a new strip of Aussie Swell Red.

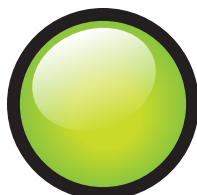
Adhesion: The Aussie Swell Red should be fully adhered to the substrate by the Aussie Seal-M. As the Aussie Swell Red begins to activate due to pre-hydration, that adhesion can be influenced. Look for gaps between the substrate and the Aussie Swell Red. Clasp the Aussie Swell Red and test the quality of the adhesion by pulling gently on the waterstop. If the Aussie Swell Red can be easily removed, the product should be replaced by a new strip.

If the Aussie Swell Red remains well bonded to the substrate and there is not any indication of major surface cracking, then the product can remain in place. Standing water should be removed as soon as possible to prevent excessive hydration prior concrete coverage.

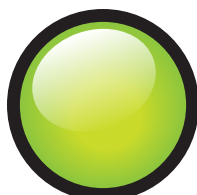
Visual Assessment Guideline for Aussie Swell Red



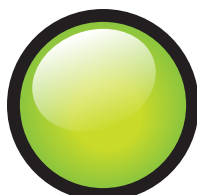
The Aussie Swell Red has not been exposed at all and remains perfectly intact.



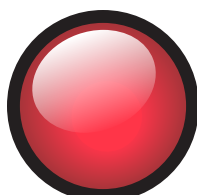
The Aussie Swell Red was left exposed and submerged for less than a day. Color has faded and the waterstop has activated slightly. Still remains mostly intact and adhered to substrate.



The Aussie Swell Red was left exposed and submerged for two days. The waterstop continues to swell due to activation. Still adhered to the substrate.



The Aussie Swell Red was left exposed for 3-5 days. The waterstop continues to further swell and is showing minor signs of surface cracking. Remains adhered to substrate.



The Aussie Swell Red was exposed and submerged for around a week. The waterstop has swelled to a point of extreme surface cracking to where it is separating from itself. To remain eligible for the warranty, removal and replacement would be required.

For additional or specific questions regarding pre-hydration of the Aussie Swell Red, please consult your local AVM Sales Representative or the Technical Services department at: **888.414.1041** or **818.888.0050**.