



## Guidelines using Water Based Bonding Adhesive E

The Modular Water Based Bonding Adhesive E, product code W563587037EU, is a water-based adhesive designed by Firestone for bonding Firestone RubberGard® EPDM membranes. It is a latex based adhesive that uses water as a carrier and contains no hazardous ingredients.



### Application Method

#### 1. Onto wooden substrates

The Modular Water Based Bonding Adhesive E may be mated while still wet but only when working over plywood, OSB or other suitable wooden substrates.

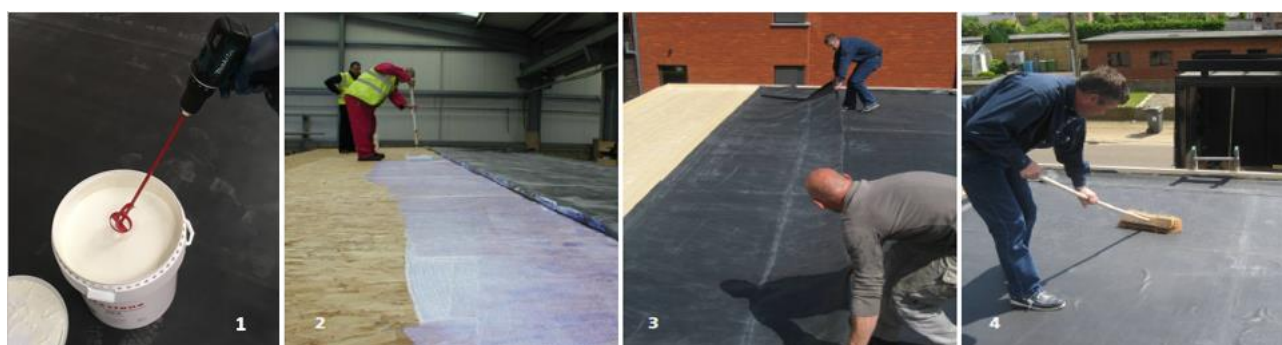
Stir the adhesive thoroughly (1) before and during use to achieve a uniform mix with no marbling or sediment. Apply the adhesive over OSB or plywood evenly to avoid globs and puddles of adhesive (2). Mate the RubberGard EPDM immediately after the adhesive has been applied (3). To ensure proper adhesion, compress the bonded portion of the sheet to the substrate with a stiff push broom (4) or heavy roller such as a linoleum roller.

The wet-mating method is ideally suited for indoor application onto modular units. After application of the adhesive the units should be kept indoors a minimum of 48 hours before transportation because of the wind stresses associated with truck transport.

Outdoors it is recommended to always use the two-sided contact method.

The wet-mating method can only be used in an outdoor application when:

- The RubberGard EPDM membrane is not exposed to freezing temperatures for minimum 48 hours. This is the time it takes for the carrier to completely dissipate.
- The roof is not subject to high wind stresses. The required wind uplift resistance is only achieved after a 48 hour period. On roofs subject to high wind uplift stress (exposed building, more than 5m high, non-airtight substrate....) the membrane should be temporarily ballasted to avoid any wind damage.





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## 2. Onto metal, masonry, concrete and approved insulation materials

The adhesive needs to be applied using the standard two-sided contact method. Stir the adhesive thoroughly before and during use to achieve a uniform mix with no marbling or sediment. Apply the adhesive evenly to avoid globs and puddles of adhesive. Care must be taken not to apply Water Based Bonding Adhesive E over seam areas. Apply the adhesive at about the same time to both the exposed underside of the sheet and the substrate to allow approximately the same drying time.

### **Note:**

*If the membrane is exposed to direct sunlight, apply the adhesive first to the substrate and then to the membrane as the drying time on the sheet will be shortened due to the elevated temperature of the sheet. Flash-off time for water based adhesives is affected by ambient temperature, humidity levels, substrate type and substrate temperature.*

Allow adhesive to flash off until tacky (time depending on ambient air conditions but may take up to 45 minutes) prior to mating the surfaces. As the carrier evaporates the adhesive will become translucent. Once it has turned translucent, test the adhesive for its dryness, using the touch-push test procedure. Do not over-dry. Roll the membrane into the substrate. To ensure proper adhesion, compress the bonded portion of the sheet to the substrate with a stiff push broom or heavy roller such as a linoleum roller.

## Application Conditions

Ambient temperatures shall be at least 5°C and rising when using water based adhesive. When ambient temperature is above 25°C and roof or parts of it are subject to direct sunlight, only standard two-sided contact application method should be applied. Due to the high temperature of the membrane, the water left in the layer of adhesive may turn to vapor and cause bubbles to appear, when using wet-mating application method.

## Substrates Conditions

Surfaces on or against which the adhesive is to be applied must be clean, smooth, free of sharp edges, loose and foreign materials, oil, grease and other contaminants and, above all, the substrate must be dry. Substrates that are prone to high moisture content shall therefore be tested for suitability of application as follows:

- Place a clear plastic of approx. 1m x 1m onto the substrate.
- Tape the edges of a clear plastic film onto the substrate.
- Expose to mid-day sun and examine for evidence of moisture such as condensation.
- If moisture is evident on the film taped over the substrate, the substrate contains too much moisture to receive adhesive and membrane.



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When using the adhesive to adhere to vertical surfaces the two-sided contact method is the only method of application.

When using the adhesive to adhere vertical porous substrates, a light prime coat of adhesive is required. This can be determined by testing a small area. The prime coat shall be allowed to dry completely (verified by the translucent color) before a standard coat of adhesive is applied. This light prime coat can be applied up to 24 hours before the application of the actual application of the adhesive.

## Coverage rate

In case of wet-mating method, the coverage rate should be between 2.5 and 3.0 m<sup>2</sup>/liter depending on the substrate.

In case of two-sided contact method, the coverage rate should be between 2.0 and 2.5 m<sup>2</sup>/liter depending on the substrate.

Some surfaces are more uneven and porous and will result in lower coverage rates.

## Storage

Do not allow the adhesive to freeze! Subzero temperatures will make the product unusable.

Store in original unopened pails at temperatures between 15°C and 25°C, in a dry, well-ventilated area. Do not store the product in direct sunlight. A shelf life of 12 months can be expected.

Once opened, use within 48 hours.

Dispose content and/or pail in accordance to national regulations.

## **Important notice!**

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