

POWERply

POWERply®  
Endure™ BIO  
Adhesive  
*Installation  
Guide*



## ROOF SYSTEM INSTALLATION USING POWERPLY ENDURE BIO ADHESIVE

### Description and Packaging:

POWERply Endure™ BIO Adhesive is a 2-component urethane used as a base and interply membrane adhesive for POWERply Modified Bitumen Systems. In addition, this adhesive is also used as a base membrane adhesive for the AlphaGuard MT or BIO Plus Roof Systems.

POWERply Endure BIO Adhesive develops excellent adhesive strength between bituminous roof system ply sheets and membranes, resisting delamination and other destructive forces. In addition, POWERply Endure BIO Adhesive adds additional waterproofing to the roof membrane system it is used within.

POWERply Endure BIO Adhesive offers the following benefits:

- Fast Curing; 2 component (base & curative) mix
- Ultra Low Odor
- Ultra Low VOC
- Strong Bond; leads to excellent wind resistance
- Excellent Compatibility with modified bitumen membranes
- Contains a high percentage of bio-based components, which provides a more sustainable approach for roofing and waterproofing installations.

POWERply Endure BIO Adhesive is applied at a 4:1 ratio. The following packaging is available:

- 4 gallon kit – Consists of 3.2 gal base (Part A) and 0.8 gal curative (Part B).  
The curative is supplied in a 1 gallon can which is poured into a base
- 250 gallon kit – Consists of 4 – 50 gal bbls base (Part A) and 1 – 50 gal bbl curative (Part B)

### Storage & Temperature Requirements:

POWERply Endure BIO Adhesive product containers must be stored at temperatures above 40°F when preparing for application. Do not apply when product temperatures are below 45°F and do not apply where overnight temperatures drop below 40°F.

Do not mix at material temperatures above 100°F because pot life will be greatly reduced.

Do not exceed 110°F storage temperatures and do not store in direct sunlight.

### Substrates:

Approved substrates include the following:

- POWERply SBS & APP MB membranes
- BURmastic Composite Ply Family ply sheets (HT, Premium, & Supreme)
- Wood fiber insulation (ASTM C208)
- Polyisocyanurate insulation
- Gypsum board (ASTM C1177 & D1278)
- Roxul brand insulation (requires increased coverage of 3.0 gal/SQ to adhere membrane)
- Various wood, plywood, tectum, metal, and masonry substrates – contact Tremco Technical Services for specific recommendations regarding surface prep, coverage rates, and application to these various structural substrates.

## Surface Preparation:

Roof surface must be smooth, clean, and dry and free from oil, dust, and all contamination.

Install roof insulation per project specifications. Plan placement of roof membranes so that water flows over or along, but not against exposed membrane edges. Begin installation of membrane at the low point of the roof.

Substrate must be smooth and flat and free of uneven obstructions. If applying POWERply Endure BIO Adhesive over membrane/plies previously installed, knock down high spots & cured puddles of adhesive to assure subsequently installed membranes will lie flat against the previously installed roofing.

## Mixing:

Use a heavy duty power drill with a Jiffy Mixer attachment. Cordless drills do not provide sufficient mixing horsepower and are not recommended since the adhesive may not properly mix.

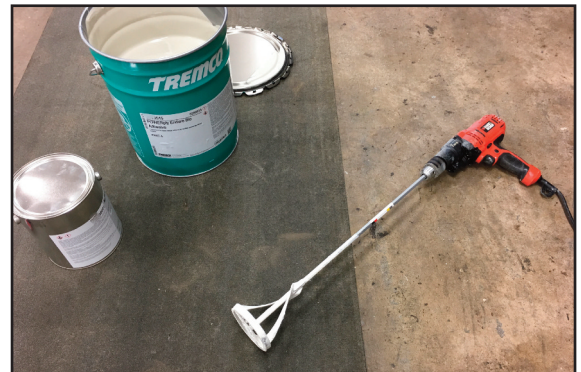
Mix Part A (Base) for 1 minute, then add Part B (Curative). Mix the combined parts for a minimum of 2 minutes, blending and moving the mixing blade from top to bottom. Mix all areas within base container.

After mixing, the pot life of mixed POWERply Endure BIO Adhesive is 20 to 25 minutes at 77°F.

## Application:

For application by squeegee, mix the base and curative as described above and pour product from the pail directly onto the substrate and spread using a serrated rubber squeegee. Do not fully invert and fully drain all remaining traces from pails. Remaining traces from sidewalls of pails are typically not fully mixed. Using remaining traces from pails will result in the use of non-curing material

POWERply Endure BIO Adhesive is spray applied using custom equipment consisting of the Graco XP70 Plural Component Spray System. This equipment is available fully outfitted with spray guns, hoses, and tips from **Spray Equipment & Service Center Inc. (Wichita, KS, 800-666-6072)**. The Grace XP70 mixes the POWERply Endure BIO Adhesive base and curative at a 4:1 ratio within a manifold and delivers the blended base/curative mixture to the point of application by spray. Do not allow mixed product to remain in the manifold or spray lines downstream from the manifold for longer than 20 minutes.



Apply adhesive at a coverage rate of 2 gal/SQ (32 wet mills or 0.8 L/m<sup>2</sup>). Backroll with a 1/2" nap roller to provide a smooth and consistent coverage. Use a mil gauge to ensure the coverage rate is accurate, including the lap area.

Embed membrane/ply sheet(s) into freshly applied POWERply Endure BIO Adhesive immediately.

- Apply pressure to fully press each membrane/ply sheet into the adhesive.
- Use a 75 pound weighted roller to press in membranes while adhesive is wet. If air pockets are noticed use the roller across the roll to work the air pockets out.



Uneven high spots of previously installed build-ups of POWERply Endure BIO Adhesive must be knocked down/ scraped off prior to application of a new coverage of POWERply Endure BIO Adhesive, to allow for subsequent plies to lay flat onto previously applied membrane.

- Use a dry roller, stiff squeegee, trowel or wide putty knife to remove excess material from outside the lap area before it cures.

POWERply Endure BIO Adhesive is acceptable for use as a lap adhesive. To ensure good adhesion, POWERply Endure BIO Adhesive must exude past the membrane lap edge. Overlap membrane side laps 4" (100 mm) minimum and end laps 6" (150 mm) minimum. Apply pressure to end laps and side laps to assure positive adhesion.

Avoid excess adhesive on the roofing plies.

- Clean the bleed out before it dries.
- Protect the roof where product is being mixed.
- Contact [productgroup@tremcoinc.com](mailto:productgroup@tremcoinc.com) if you have excessive bleed out for additional recommendations.

When installing a POWERply MB system in a 1+1 (2 ply) configuration, stagger cap membrane laps from base membrane laps a minimum of 12", so these laps do not align directly on top of each other. Stagger end laps 36" (approx. 1 m).

Use approved materials within the system. No solvent based materials or silicone materials, Polyroof SF or BURmastic Adhesive SF are permitted. Geogard Seam Sealer, Solargard Seam Sealer, and TremSEAL Pro are recommended as compatible roof adhesives and sealants.

## Clean Up

Review product SDS for recommendations on safe handling of POWERply Endure BIO Adhesive. Isopropyl Alcohol is recommended to remove uncured adhesive from tools and equipment.

## Flashing Systems:

POWERply Endure BIO Adhesive may be used for flashing systems. Sheet must be mechanically attached at the top prior to applying adhesive to substrate.