

GENERAL

Proper substrate preparation is critical to the successful application of WestWood PMMA systems. Substrates must be prepared according to WestWood USA recommendations and the specific requirements of the materials being installed. Some surfaces require mechanical preparation, such as scarification, sandblasting, or grinding.

The finished substrate must be clean, dry, and free of dirt, grease, oils, moisture (including ice or frost), microbial growth, and chemical contaminants that could impair adhesion.

CONCRETE

Concrete substrates shall comply with ACI 301 and ACI 308 standards, with a minimum compressive strength of 3,500 psi for standard WestWood primers, or a minimum of 2,500 psi for acceptable moisture mitigation primers on new concrete. Concrete must be cured for at least 28 days in accordance with ACI 308 or as otherwise directed by the project specifier or design professional.

Concrete substrates shall have a maximum moisture content of 6% or 75% relative humidity, as determined by ASTM F2170 ("Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using In-Situ Probes").

The surface finish shall attain a Concrete Surface Profile (CSP) of 2, 3, or 4, with CSP 3 considered optimal, per the International Concrete Repair Institute (ICRI). Substrates must be free of laitance—a weak, powdery surface layer of cement dust, lime, and fine sand particles—which can be removed by shot blasting or mechanical grinding.

Concrete must also be free of irregularities, including loose material, spalling, voids, and cavities, all of which must be properly repaired prior to membrane installation. Precast concrete surfaces must be free of release agents that could impair adhesion.

Upon completion of surface preparation, substrates shall be primed with Wecryl 176 Primer as detailed in the corresponding product data sheet. Adhesion testing is recommended to verify a positive bond prior to application.

MASONRY

Masonry walls shall be constructed of hard kiln-dried brick, concrete block, or precast tilt-up or cast-in-place concrete. Prepare masonry substrates in the same manner as concrete surfaces, primarily via mechanical grinding.

Do not apply membrane over soft or scaling brick or masonry, defective mortar joints, or walls with broken, damaged, or leaking coping, scarifying as necessary.

Walls built with ordinary hollow tile or other non-waterproof materials are not acceptable to receive flashings unless they are properly waterproofed to prevent moisture infiltration from above or behind the flashing system.

WOOD

Wood sheathing shall be clean, dry, and structurally sound. Decking must be a minimum ¾-inch (19 mm) thick APA A-C, Group 1, Exterior or Exposure 1-rated tongue-and-groove panels, sized 48 inches (1220 mm) by 96 inches (2440 mm). Sheathing shall be securely fastened to structural members using screws or spiral-threaded or ring-shank nails.

Replace any wet, rotted, contaminated, or damaged wood. Wood decking must not flex at joints running parallel to the supporting structure; the use of plywood joint clips is encouraged.

High-density wood fiberboard, oriented strand board (OSB), and fire-treated lumber or sheathing are not acceptable substrates.

Wood substrates typically exhibit a moisture content between 8% and 12%. The applicator is responsible for verifying the substrate's suitability prior to covering.

All wood surfaces must be primed with Wecryl 176 Primer.

Individually treat all board joints by first filling all joints, gaps, holes, and cracks with Wecryl 810 Paste. After filling, install a 2-inch strip of masking tape as a bond breaker and apply a minimum 6-inch (150 mm) wide strip of reinforced Wecryl 230 Thixo centered over the joint.

Wood planking is not an acceptable substrate for PMMA applications and must be treated using one of the following methods:

- Install a minimum ½-inch (13 mm) thick cement board over the planking.
- Install an approved SBS membrane sheet over the planking (a cover board may be required).
- Install compliant wood sheathing over the planking.

METAL

All metals must be properly prepared prior to the application of any PMMA products.

Clean and prepare metal surfaces to a white metal finish using mechanical means in accordance with SSPC-SP3 (power tool cleaning) or as otherwise required. Surfaces must be free of loose contaminants, dust, dirt, grease, oils, drawing or cutting compounds, mill scale, rust, and paint.

A minimum 300-grit sanding wheel or belt shall be used to abrade metal surfaces. Acceptable tools for abrasion include:

- Paddle wheels
- Grinding wheels
- Belt grinders/sanders
- High-speed rotary tools
- Sandblasters

Extend surface preparation a maximum of 1/8 inch (3 mm) beyond the termination point of flashing materials.

After surface preparation, wipe down the entire metal surface using WestWood Cleaner.

Prime all metal substrates with the appropriate WestWood metal primers prior to applying flashing or membrane materials.

Note: galvanized and zinc-rich metals are typically passivated or coated with oil requiring special preparation. Passivator must be completely removed by mechanical abrasion. Application of a copper sulfate solution resulting in the surface subsequently turning black is an indicator that the galvanized surface has been properly prepared.

RIGID PLASTIC

Rigid plastic substrates must be cleaned and lightly abraded to create a rough, open surface suitable for adhesion.

INSULATED APPLICATION

Cementitious cover boards shall be specified for insulated assemblies. Polyisocyanurate insulation and gypsum-based cover boards are not approved substrates for WestWood PMMA applications.

All surfaces shall be primed with Wecryl 176 Primer.

Individually treat all board joints by first filling all joints, gaps, holes, and cracks with Wecryl 810 Paste. After filling, apply a minimum 4-inch (102 mm) wide strip of reinforced Wecryl 230 Thixo centered over the joint.



ROOFING SOLUTIONS



WATERPROOFING



FLASHING SOLUTIONS



TRAFFICABLE SURFACES

WESTWOOD TECHNICAL GUIDELINES

SUBSTRATE PREPARATION GUIDE

SBS AND BUILT UP ROOF (BUR)

Prepare SBS-modified bitumen membranes and BUR installations by ensuring all surfaces are clean, dry, and free of moisture, loose sand, granules, dirt, and debris. Remove and repair all blisters, loose materials, and surface irregularities prior to application. For cold-applied SBS membranes, verify that adhesives are fully cured and free of residual solvents. Cold adhesive-applied SBS membranes less than 90 days old are not acceptable substrates.

APP

Only granulated APP surfaces are acceptable. Ensure surfaces are clean, dry, and free of moisture, loose sand, granules, dirt, and debris. Remove and repair all blisters, loose materials, and surface irregularities prior to application.

COAL TAR PITCH

Coal tar pitch is not an approved substrate for WestWood PMMA applications.

To distinguish coal tar pitch from asphalt, apply a small quantity of standard lighter fluid. If the fluid turns a clear yellow color, then coal tar pitch is likely present. (Asphalt will normally turn brown or remain largely unchanged.) Additionally, coal tar pitch often has a stronger and more distinct smoky odor compared to asphalt.

Any coal tar pitch residue remaining on the substrate from a roof tear-off shall be primed using Wecryl 122 Primer prior to the application of any materials. Adhesion testing is required prior to commencing with any installation of materials where coal tar pitch exists, or had existed.

SINGLE PLY APPLICATIONS

WestWood PMMA systems may be applied to both PVC and TPO single-ply membranes. EPDM is not an approved substrate for WestWood PMMA applications. Other single-ply membranes may require an adhesion tests conducted prior to the application of any PMMA materials or primers.

For PVC substrates, abrade substrate to remove sheen from membrane surface using 300-grit sand paper. Wipe area with WestWood Cleaner.

For TPO substrates, abrade substrate to remove sheen from membrane surface using 300-grit sand paper. Wipe area with WestWood Cleaner. Apply Wethane 109 TPO Primer and allow to dry.

EXISTING COATINGS

Surfaces with existing coatings are not acceptable substrates for WestWood PMMA applications. Remove any existing coatings prior to any WestWood PMMA application.

SUBSTRATE REPAIRS - GENERAL

Before applying any membrane, repair all joints, cracks, voids, fractures, and indentations in the substrate. Sound the substrate as necessary to identify spalls, blisters, voids, and blow holes on both vertical and horizontal surfaces requiring repair.

Use Wecryl 810 Paste or WestWood resin-mortars for all substrate repairs. Resin-mortars may be combined with kiln-dried quartz silica to create modified mortars suitable for leveling, patching, and general repairs. Resin-mortars are recommended for trowel-applied vertical and horizontal repairs. Refer to the WestWood's **Repair Mortar Guidelines** for additional information.

SUBSTRATE LEVELING

Fill all cavities and depressions with an appropriate WestWood resin-mortar leveling mixture to achieve a flat, sound surface. Surfaces to be leveled or patched must first be primed with the appropriate WestWood primer, if required. Contact WestWood Technical Services for additional information.

STATIC CRACKS

Confirm that the crack is non-moving. Remove any existing filler and clean the crack using a brush and oil-free compressed air. Fill the crack with WestWood 810 Paste.

DYNAMIC CRACKS

Confirm that the crack is moving. Remove any existing filler and clean the crack using a brush and oil-free compressed air. Fill the crack with WestWood 810 Paste or WestWood resin-mortar. After filling, apply a minimum 6-inch (150 mm) wide strip of reinforced Wecryl 230 Thixo.

BOARD AND SEAM STRIP-IN APPLICATION

Apply an even base layer of Wecryl 230 Thixo using approved roller at a minimum rate of 0.19 kg/sf (2.0 kg/m²). While the resin is still wet, fully embed the WestWood Fleece reinforcement, removing all trapped air and ensuring complete saturation. After the base layer is applied, install an even topcoat of Wecryl 230 Thixo at a minimum rate of 0.12 kg/sf (1.3 kg/m²) to achieve uniform coverage and the specified membrane thickness.



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