

Spec Sheet

LAVA 20 Poly System

Wood-Plywood



Highly Fortified Roof Membrane Solution

The Lava 20 polyurethane membrane system features state-of-the-art moisture curing, yielding a fast and incredibly flexible waterproof barrier with superior tear strength and impact resistance. This durable, easy to apply membrane system transforms commercial flat roofs with unmatched weather-enduring protection and long lasting, architectural-grade aesthetics.

Lava 20's versatility, fast application, and superior protection achieves long-term cost savings for property owners and facility managers. Formulated with extraordinary mechanical elasticity, the system is highly resistant to any weather induced substrate movement or dilation, thereby eliminating roof maintenance costs. Lava 20's deep penetrating membrane galvanizes practically any roof substrate and will extend service life, eliminate corrosion, and improve energy savings.

System Overview

The Lava 20 system is a quick drying, liquid poured membrane that can seal, protect, and weatherproof a wide range of new and existing commercial roof structures. Olmeck offers an array of fast acting Lava 20 primers, highly breathable membranes, and robust top coats that are specifically formulated to address UV, acid rain, frost, chemical, thermal shock, and water intrusion. Exhibiting thorough adhesion and layer bonding characteristics, the membrane system acts as a formless, jointless membrane when applied, empowering commercial roof structures with high performance, year-round resiliency.

Advantages

- Superior weatherability for enduring, watertight protection.
- Rapid curing capabilities surpass traditional methods.
- Seamless design with no joints.
- Long-lasting, architectural-grade finish resists corrosion.
- Exceptional chemical and UV resistance.
- High solar reflectivity enhances cool roof performance.
- Extreme durability withstands thermal shock and all temperatures.
- Zero maintenance required.
- 25-Year Warranty for long-term assurance.
- Flexible and highly elastic, remains pliable in all temperatures.
- Ponding water-resistant.
- Chemical-resistant for added protection.
- Versatile application.
- Universal bonding to almost any surface.
- Vapor permeable (breathable).
- Easy detailing for a seamless finish.



Applications & Compatibilities

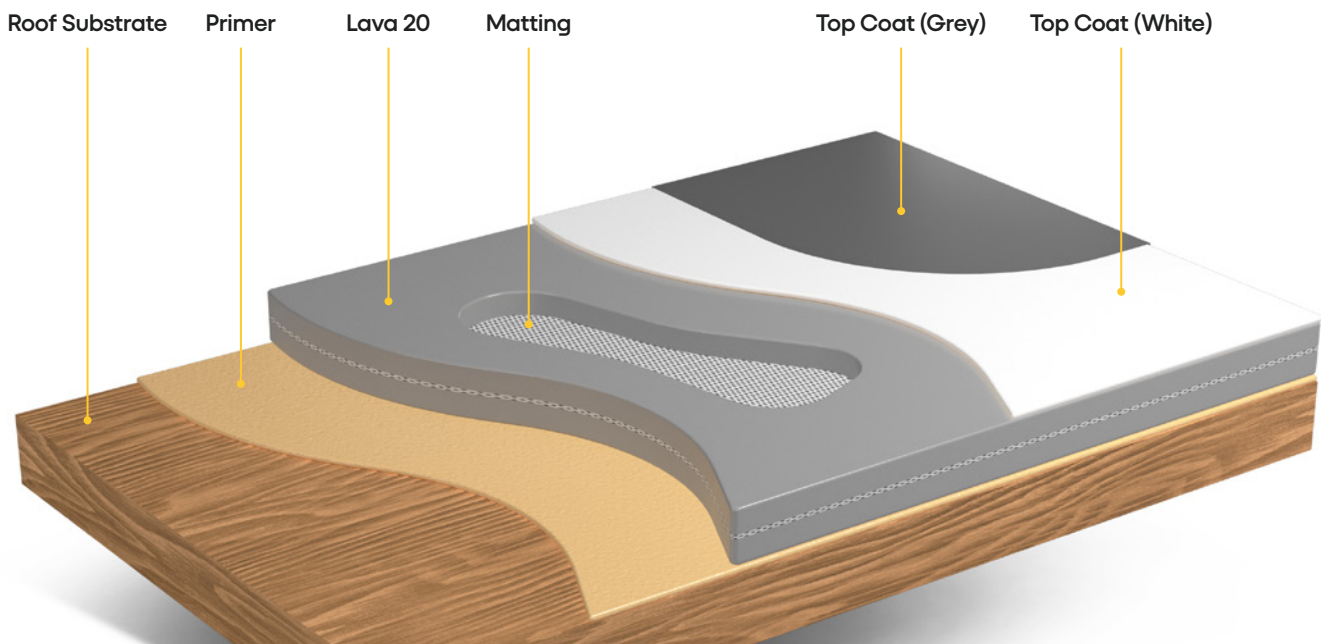
Substrate Compatibilities

- Concrete
- Metal
- Foam
- Bur & Tar
- Wood/Plywood/Timber
- EPDM & TPO
- Spray Foam
- Cement and Insulation Boards
- Asphalt Felts
- EPDM and PVC membranes
- Gypsum
- Acrylic

Roof & Structural Applications

- Flat or Pitched Roofs
- Parapet Walls
- Built-Up Roofs (BUR)

Application Overview



Lava 20 Poly Membrane

Technical Data

PROPERTY	RESULTS	TEST METHOD
Elongation at Break	< 600 %	ASTM D 412 / DIN 52455
Tensile Strength	> 4 NI mm2	ASTM D 412 / DIN 52455
Water Vapor Permeability	> 25 gr/m2/day	ISO 99932:91
Resistance to Mechanical Damage by Static Impression	High Resistance (class: P3)	EOTA TR-007
Resistance to Mechanical Damage by Dynamic Impression	High Resistance (class: P3)	EOTA TR-006
Resistance to Water Pressure	No Leak (1m water column, 24h)	DIN EN 1928
Adhesion to concrete	>2.0 N/mm2 (concrete surface failure)	ASTM D 903
Crack Bridaina Capability	Up to 2 mm crack	EOTA TR-008
Hardness (Shore A Scale)	65-70	ASTM D 903
Resistance to Root Penetration	Resistant	UNE 53420
Solar Reflectance (SR)	0.87	ASTM E903-96
Solar Emittance (e)	0.89	ASTM E408-71
Thermal Resistance (176 °F for 100 days)	Passed. No significant changes	EOTA TR-011
UV Accelerate - Aging in the Presence of Moisture	Passed. No significant changes	EOTA TR-010
Resistance After Water Aging	Passed	EOTA TR-012
Hydrolysis (5% KOH, ? days cycle)	No significant elastomeric channel	Inhouse Lab
Construction Material Fire Class	B2	DIN 4102-1
Resistance to Flying Sparks and Radiation Heat	Passed	DIN 4102-7
Service Temperature	-22 °F to +302 °F	Inhouse Lab
Shock Temperature (20 min)	392 °F	Inhouse Lab
Rain Stability Time	3-4 hours	Conditions: 68 °F, 50% RH
Light Pedestrian Traffic Time	18-24 hours	Conditions: 68 °F, 50% RH
Final Curing Time	7 days	Conditions: 68 °F, 50% RH
Chemical Properties	Good resistance against acidic and alkali solutions (5%), detergents, seawater, and oils.	



Lava 20 System Installation

I. Initial Roof Surface Inspection

Prior to applying the LAVA 20 coating system, any residual repairs should be performed. It is important to inspect and examine all elements of the roof, including but not limited to:

- Wet areas or areas with sitting water must be cut out and replaced before application
 - Drainage performance
 - Water leaks
 - Miscellaneous roof penetrations
 - Existing corrosion or rust areas
 - HVAC flashing and/or debris
 - Seams, terminations, and reglets
 - Coping and flashing
 - Sleepers and pitch pockets
 - Sign or display anchorage
 - Miscellaneous anchored devices, equipment, or structural supports
- c. Compressive strength of substrate should be at least 25 MPa and viscous strength properties should be at least 1.5 MPa.
 - d. For concrete surfaces, a grinding machine can be used to remove dust, filth, fats, oils, organic materials, and old loose coatings.
 - e. Smooth off any surface imperfections found along membrane coverage area.
 - f. Cracks, joints, and/or voids throughout roof surface should be filled with **Lava PU Mastic**.
 - g. Utilize polyester tape or geotextile for flashing drains, joints, and base angles.
 - h. Ensure that all adjoining surface areas that are not to receive the Lava 20 membrane be thoroughly masked and protected.
 - i. Setup a suitable, easy-to-access workstation for the sorting and mixing of all membrane materials.
 - j. Schedule and synchronize applications of each Lava 20 layer for accurate coating times. Make sure to apply the entire system during temperature conditions between 41 °F and 95 °F.

II. Roof Surface Preparation

For optimal results, careful surface preparation is important. The surface should be free of any pollution that could compromise the membrane's adhesion.

- a. For best results, the surface should be washed clean, free of loose materials, stains, grease, dust, debris, and other contaminants.
- b. System can be spread out on wood surfaces using a roller, brush, squeegee, or airless spray. The use of polyester fabric matting for reinforcement is recommended.



III. Installation Instructions

For Wood/Plywood Substrates

Acceptable Wood Grades

- All wood/plywood surfaces must conform to U.S. Doc PS 1 or CSA 0325 and carry an acceptable grade marking of either APA AB EXT or APA AC EXT by the Engineered Wood Association or applicable organization. It is recommended to use underlayment grade plywood that features solid, plugged cross bands under the face veneer.

Unacceptable Wood Grades

- Due to poor dimensional stability of wood with weak glue lines, buckling or lifting of the top ply can occur. Excessively splintered, leafed, and raised surface grains may also affect surface adhesion. Therefore, avoid wood/plywood with APA C-D EXT and APA C-C EXT grades, Exposure 1 markings, oriented strand board (OSB), and waferboard. Lauan, and Mahogany are also not suitable for liquid-applied membranes and offer poor adhesion characteristics. Coating over wet wood/plywood surfaces will greatly reduce Lava 20 membrane adhesion.

Application Tools & Materials Required

Coating over wet wood/plywood surfaces will greatly reduce Lava 20 membrane adhesion.

System can be spread out on wood/plywood surfaces using a roller, brush, squeegee, or airless spray. The use of polyester fabric matting for reinforcement is recommended.

Installation:

1. **Wash** entire surface clean, removing all surface debris, dirt, embedded stains, chemicals or oils, and organic matter.
2. **Inspect** and verify that the entire roof surface is completely dry and free of wet spotting.
3. **Primer**
Prime the entire surface area with Lava 20 Quick Primer at a rate of one gallon per 300-350 sq. ft. and allow for a minimum of 15-30 minutes dry time.
4. **Membrane**
 - a. Cracks, joints, and/or voids throughout roof surface should be filled with **Lava PU Mastic**.
 - b. Wall-to-floor connections, joints, 90° angles, chimneys, pipelines, waterspouts (siphon), etc. should always be reinforced with geotextile matting or equivalent, overlapping strips by 5-10 cm in order to strengthen the entire surface.
 - Use **Lava 20 Vertical Membrane** for vertical and sloped surfaces, specifically formulated with high viscosity for easy application on parapet walls and other vertical roof structures.
 - Use **Lava 20 Detail Membrane** for patching or filling large holes, gaps, and other roof penetrations, specifically formulated for rapid, bubble free curing over roof detail structures.
 - c. A cut piece of fabric can be applied over still-wet Lava 20, then pushed inward until fully absorbed. Once fully absorbed, saturate this area again with additional Lava 20.
 - d. Coat the entire surface area with Lava 20 at a rate of 18.4 sq. ft. per gallon.
 - e. By incorporating **Lava 20 Catalyst**, the entire surface can be covered in a single coat. Thoroughly mix 0.19



gallons of Lava 20 Catalyst directly into a 6.6-gallon bucket of membrane.

5. Top Coat

Apply the **Lava 20 Top Coat** over the entire surface area at a rate of 1 gallon per 365 sq. ft. Standard colors include white or dark grey, with additional custom colors available for special orders.

- a. For final color stable, chalk-free surface appearances, apply no more than 1 or 2 layers of Lava 20 Top Coat.
- b. For final dark colors, additional custom colors can be ordered.

6. Curing & Finishing

Do not apply any Lava 20 layers thicker than 2.5 mm (dry film). For ideal curing, the temperature range during/after application should be between 41 °F and 95 °F. If the temperature conditions are too high, curing is hastened. If the temperature conditions are too low, curing is delayed.

Wood Surfaces Application Term Rates

Coverage Term	Primer (Gal/Sq)	DFT mils	Geotextile (6 mils)	Lava 20 Gal/Sq	DFT Mils	Catalyst compatible	Topcoat Gal/Sq	DFT mils	Total DFT mils	Warranty
25 years	0.47	2	✓	5.9	95	✓	0.38	3	106	Platinum
20 years	0.47	2	✓	4.5	75	✓	0.38	3	86	Platinum

* DFT (Dry Film Thickness) is rounded to nearest mil, and is theoretical. Actual DFT will vary dependent on substrate profile, application technique and waste factor.

