



## TECHNICAL DATA SECTION 1

| Properties                                                            | Test Method                     | Test Results                                                                                                              |
|-----------------------------------------------------------------------|---------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| Color                                                                 |                                 | Teal (blueish green)                                                                                                      |
| Permeabilities                                                        | ASTM D 1653B                    | Inverted: 13.23 @ 30 mil dry/14.98 @ 20 mil dry<br>Standard: 8.64 @ 30 mil dry/6.74 @ 20 mil dry                          |
| Perm Rating                                                           | ASTM E 96                       | Concrete .76<br>CMU .42                                                                                                   |
| Water Penetration                                                     | ASTM E 331                      | Passed 15 psf/DP80                                                                                                        |
| Temperature Cycling                                                   | ASTM E 2264-05                  | Passed at Level 3, thermal cycling at 0°F to 180° F<br>(-18°C to 82°C)                                                    |
| Hydrostatic Pressure Over Cracks                                      | ASTM C 836-95                   | 35.45 Bursting Pressure (ft H <sub>2</sub> O)                                                                             |
| Low Temperature Flexibility & Crack bridging                          | ASTM C 836, Section 6.7         | No cracking or damage was observed                                                                                        |
| Adhesion Strength                                                     | ASTM C 836, Section 6.10        | Average 2.634 lbf/in                                                                                                      |
| Resistance to Water                                                   | ASTM D 2939, Section 15         | No softening or loss of adhesion                                                                                          |
| Extensibility after heat aging                                        | ASTM C 836, Section 6.12        | No breaking, cracking or tearing of the film was observed                                                                 |
| Extensibility after resistance to Decay                               | ASTM E 154                      | No rupture, cracking or pinholes were observed                                                                            |
| Color Fastness of Surface Coating                                     | ASTM D 2565                     | No change was observed after 1000 hours of exposure                                                                       |
| Resistance to Mold Growth                                             | ASTM D 3273-94                  | No mold growth was observed                                                                                               |
| Water Absorption 7 Days Exposure                                      | ASTM D 471                      | 38.8% @ 30 mil dry<br>34.6% @ 20 mil dry                                                                                  |
| Tensile @ Peak                                                        | ASTM D 412                      | 71 psi @ 30 mil dry<br>73 psi @ 20 mil dry                                                                                |
| Elongation @ Break                                                    | ASTM D 412                      | 597% @ 30 mil dry<br>604% @ 20 mil dry                                                                                    |
| UV Exposure Period                                                    | ASTM D 4798                     | 180 days                                                                                                                  |
| VOC                                                                   | ASTM D 3792                     | Contains <190 gm/l voc                                                                                                    |
| Weight                                                                |                                 | 9 lbs/gallon                                                                                                              |
| Coverage                                                              |                                 | Up to 65 square feet per gallon @ 30 mil wet                                                                              |
| Service Temperature                                                   |                                 | 40°F to 120°F (4°C to 49°C)                                                                                               |
| Application Temperature                                               |                                 | 40°F (4°C) and rising                                                                                                     |
| Drying time @ 77°F (25°C), 50% RH                                     |                                 | Temperature & humidity dependent Touch: within an hour                                                                    |
| Flammability                                                          |                                 | The product is an aqueous solution and will not burn. If the liquid is allowed to evaporate, the solid residue will burn. |
| Peel-Off Strength LWM200 on CMU Block                                 | ABAA T0002-2019/<br>ASTM D 4541 | 535 psi                                                                                                                   |
| Peel-Off Strength Portland Cement Based Stucco on LWM200 on CMU Block | ABAA T0002-2019/<br>ASTM D 4541 | 35 psi                                                                                                                    |

| TECHNICAL DATA - SECTION 2                                                                            |                                                |                                                                                 |
|-------------------------------------------------------------------------------------------------------|------------------------------------------------|---------------------------------------------------------------------------------|
| AAMA 714-19                                                                                           |                                                |                                                                                 |
| Properties                                                                                            | Test Method                                    | Test Results                                                                    |
| Adhesion Strength                                                                                     | AAMA 714 § 5.1<br>ASTM C 794                   | CMU 13 pli<br>Cement Mortar Slabs 12 pli<br>Plywood APA Grade Exposure 1 13 pli |
| Peel Adhesion Req. ≥ 5 pli                                                                            |                                                |                                                                                 |
| Water Penetration Resistance<br>Around Nails (Pass/Fail)                                              | AAMA 714 § 5.2 &<br>§ 5.3                      | 1. As Received Pass<br>2. Thermal Cycling Pass                                  |
| Accelerated Aging                                                                                     | AAMA 714 § 5.3<br>ASTM G 154<br>ASTM C 794     | 1. Cement Mortar Slab 10 pli<br>2. Appearance Pass (No change)                  |
| 1. Peel Adhesion Req. ≥ 5 pli<br>2. Appearance                                                        |                                                |                                                                                 |
| Elevated Temperature                                                                                  | AAMA 714 § 5.4<br>ASTM C 794                   | 1. Cement Mortar Slab 10 pli<br>2. Appearance Pass (No change)                  |
| 1. Peel Adhesion Req. ≥ 5 pli<br>2. Appearance                                                        |                                                |                                                                                 |
| Thermal Cycling                                                                                       | AAMA 714 § 5.5<br>ASTM C 794                   | 1. Cement Mortar Slab 11 pli<br>2. Appearance Pass (No change)                  |
| 1. Peel Adhesion Req. ≥ 5 pli<br>2. Appearance                                                        |                                                |                                                                                 |
| Crack Bridging Ability                                                                                | AAMA 714 § 5.7<br>AAMA 711 § 5.8<br>ASTM C1305 | See Low Temperature Flexibility & Crack Bridging in<br>Section One above        |
| No cracking, splitting, pinholes or<br>other conditions in the area of the<br>joint in the substrates |                                                |                                                                                 |
| Water Immersion                                                                                       | AAMA 714 § 5.7<br>AAMA 714 § 5.8<br>ASTM C 794 | 1. Anodized Aluminum 11 pli<br>2. Appearance Pass (No change)                   |
| 1. Peel Adhesion Req. ≥ 5 pli<br>2. Appearance                                                        |                                                |                                                                                 |

## PACKAGING

1 gallon and 5 gallon containers (larger containers available upon request)

## DESCRIPTION

**LWM200™** is a liquid applied waterproofing membrane that is a non-hazardous, water-based non-bituminous, environmentally friendly, elastomeric polymer dispersion waterproofing membrane.

## FEATURES

- One coat application (based upon a 30 mil wet application)
  - Windows can be installed when LWM200 is dry to the touch. (Typically within one hour)
  - Allow 24 hours for full cure
- No primer required
- Will stop water leaks in non-structural cracks
- Can be applied to damp openings
- Allows for easy reapplications and repairs
- Continuous coating, eliminates seams
- Paintable, UV stable, will not emulsify
- Standard color is teal (bluish green)
- Apply with brush or roller
- Reduces potential for mold growth
- Permeable
- Compatible with most commonly used building and window substrates, such as OSB, plywood, CMU, vinyl, aluminum, DensGlass Gold®, Huber Zip Wall® sheathing, treated lumber and various foam insulated products
- Can be applied on green concrete
- Will accept direct application of Stucco

## USES

**LWM200** is specifically designed for the demanding requirements of waterproofing window, door and CMU openings; recessed window and door openings; an air barrier/weather resistant barrier on exterior sheathing products; and to waterproof commercial and residential foundations.

## LIMITATIONS

Do not let product freeze. Do not dilute liquid applied waterproofing membrane. Store indoors at temperatures above 40°F (4°C). Protecto Wrap recommends the ambient temperature should be 32°F (0°C) and rising before application. Do not leave product in direct sun light. Do not leave container open when not using liquid applied waterproofing membrane. Do not use during rain or snow storms.

## SHELF LIFE

**LWM200** has a minimum 12 month shelf life if stored in original unopened containers (some separation may occur and should be re-mixed thoroughly prior to use using a standard paddle mixer).

## STORAGE

**PROTECT FROM FREEZING.** Store between 40°F (4°C) and 120°F (49°C) in original unopened containers out of weather and direct sunlight. If material has frozen, it will turn into a semi-solid condition and/or smell bad and should not be used.

## ABOVE GRADE APPLICATIONS

### PREPARATION

Repair all structural deficiencies before applying **LWM200**. All surfaces should be clean and free of any frost, dirt, debris or other contaminants. Protect areas or surfaces not to be coated, such as doors, windows and floors, prior to applying **LWM200**.

Non-structural gaps and cracks up to 1/16" can be sealed with **LWM200**. Gaps and cracks 1/8" to 1/4" must be sealed with **Protecto Sealant 25XL**. Gaps and cracks 1/4" to 3/8" must be filled. Gaps larger than 3/8" must be repaired prior to applying **LWM200**.

### APPLICATION

**LWM200** may be applied with a brush or roller without dilution. A minimum total wet application of 30 mils and a surface with 10 or less pinholes per square foot is required for a waterproofing system using a brush, roller, or spray application.

**LWM200** provides a suitable substrate for direct stucco application. For best results the base coat should be applied as a thin coat and slightly drier than if being applied directly to CMU. Heavy coat may slump if the mixture is too wet. Bonding agents should not be necessary; however, if they are used they should be latex based.

Specific installation instructions and detail drawings can be found at [www.protectowrap.com](http://www.protectowrap.com).

**LWM200's** water based formula allows it to be applied over green concrete. The American Concrete Institute defines green concrete as concrete which has set but has not appreciably hardened.

### CLEAN UP

Tools and surfaces can be cleaned with soap and water if **LWM200** is not cured.

## BELOW GRADE APPLICATIONS

### BELOW GRADE INSTALLATION INSTRUCTIONS

**LWM 200** is code compliant with the International Code Council as a Below Grade Foundation Waterproofing material. **LWM 200** is approved at 30 wet mils and has passed all ASTM's under the Alternative criteria (AC29) by the ICC as an alternative to the standard 60 mil wet Bituminous application. **LWM 200** is not intended to replace the installation of a properly installed drainage system or properly installed and prepared foundation wall. Always perform a jobsite test to ensure desired results will be achieved prior to starting the full installation.

Keep a copy of the Technical Data Sheets and material SDS on hand and review for your own knowledge and safety. Refer to [www.protectowrap.com](http://www.protectowrap.com) for current information. Because **LWM 200** is non-hazardous no special clothing or vehicle permits are required. Safety glasses, masks and gloves do provide additional protection.

LWM 200 is a water based acrylic polymer resin. Because of the water based nature of this product it can be applied to damp and green walls. LWM 200 is resistant to Ultraviolet Rays and can be applied to walls above grade as well as below grade.

The material should always be mixed prior to use. Do not add water and keep the material stored out of direct sunlight in temperatures above freezing.

### **BELOW GRADE SURFACE PREPARATION**

On unparged masonry block foundation walls, Protecto Seal Vapor Block must be used as a sealer prior to the application of LWM 200. Refer to Protecto Seal Vapor Block literature for Installation Instructions (Visit [www.protectowrap.com](http://www.protectowrap.com) ).

1. Remove any loose concrete or other projections from the wall surface with a brush or broom.
2. Inspect surface for any cracks, imperfections or excessive honeycombs. If present, contact the builder to inform him of the deficiencies.
3. Allow time for all form oil or solvents to dissipate if applying immediately after the forms have been removed.
4. Patch all below grade tie locations, honeycombs and deficiencies with Hydraulic Cement or other material designed to repair these locations.
5. Sweep all dirt and debris from footer and pay particular attention to the intersection at the footing and wall. This is key when waterproofing a foundation.

### **EQUIPMENT**

LWM 200 can be applied with paint brushes and rollers. For best product yield and even application it is recommended to use an airless paint sprayer that achieves a flow rate of 1.5 to 2 gallons per minute. A typical machine would be a Graco 7900 or equal. Tip size should be a reversible .531 or .631 spray tip. Use only #30 mesh filters in pump and remove any filters from spray gun. Keep pressure between 1,000 to 2,000 PSI.

### **APPLICATION**

1. This product can be applied when the air temperature is 40°F and rising at the time of application. Minimum allowable temperatures are affected by wind, sunshine, humidity and heat of hydration.
2. Position vehicle in a safe place on one corner of foundation wall. Roll out hose and walk around to opposite corner of foundation.
3. Begin at the bottom of wall where the footing and wall meet. Turn tip parallel with wall and spray a bead of material about an inch above the footing. This will add extra protection at the seam where the wall and footing meet.
4. In a side to side motion evenly apply material to the wall as you proceed up to the top of the foundation.
5. The material shall be installed to a 30-mil wet application which will dry down to approximately 18 dry mil (+/- 3 mils). There are two ways of achieving this thickness.
  - a. For new applicators or when applying with a roller or brush, it is recommended to apply a first coat of 15 wet mils and then apply a second 15 mil coat after the initial surface has cured. Allow 24 hours for full cure. Note: For 60 mil applications, allow 48 hours for full cure prior to backfilling.
  - b. For experienced applicators, a 30-mil wet application can be achieved in one application.
  - c. 15 and 30 wet mil gauges are available from your local supplier.
6. Pay close attention to corners of windows, tie holes, cold joints and other places of concern when applying material.
7. Material must be completely cured prior to any installation of a protection, drainage or any other board can be applied. Installation of Protection Board or Drainage Mat required prior to backfilling to protect the Waterproofing.

### **CLEAN UP**

Air is the enemy in keeping the system clog free. Attempting to flush the system can create more problems than leaving the entire unit fully charged at all times with LWM 200. Also keep the end of the wand in water to prevent material from hardening on the reversible tip.

### **CAUTION**

Protecto Wrap Company recommends the use of protective gloves and safety glasses. **LWM200** contains Latex polymers.

**LIMITED WARRANTY**

**LWM200** is covered by the Protecto Wrap Company Standard 10 Year Limited Warranty.

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