

# Madewell® Permaseal Platinum™

## Low Permeability Epoxy Coating System



### FEATURES/BENEFITS

|   |                               |
|---|-------------------------------|
| EXCEPTIONAL WATER VAPOR BARRIER         | FAST SETTING AND LOW ODOR     |
| COMPATIBLE WITH MOST FLOORING SYSTEMS   | QUICK AND SIMPLE INSTALLATION |
| SUPERIOR IMPACT AND ABRASION RESISTANCE | AVAILABLE 10 YEAR WARRANTY    |

### PRODUCT DESCRIPTION

**M**ADEWELL® Permaseal Platinum™ is a heavy duty, high density 100% solids two component moisture tolerant epoxy coating product. It is designed to resist permeation by water vapor and control alkalinity to levels acceptable for most coatings, adhesives and floor covering systems. This one coat system is designed for use on concrete floors in industrial and commercial construction.

Madewell Permaseal Platinum is normally applied by roller at a thickness of 16 to 21 mils in a single coat, although additional coats may be applied to seal rough and/or porous concrete surfaces. Its free spreading characteristics, low odor, absence of volatile solvents, fast set time and easy cleanup help to minimize labor costs and reduce down time.

Madewell Products Corporation offers an optional 10 year warranty covering Madewell Permaseal Platinum and all approved adhesives, leveling materials and flooring materials applied over Madewell Permaseal Platinum when Madewell Permaseal Platinum is installed by a certified applicator in commercial or industrial applications.

### PRODUCT DATA

#### COMPOSITION:

100% Solids, two component low permeability epoxy coating

#### FINISH:

Semigloss

#### STANDARD COLOR:

Medium grey (gray).

#### APPLICATION RATES:

Typically 16 to 21 mils in one coat.

Madewell Permaseal Platinum will reduce water vapor emission to less than 2 pounds per 1,000 ft<sup>2</sup> of concrete surface area per 24 hours and control concrete substrate alkalinity up to a pH of 14 when properly applied at the application rates outlined herein.

Recommended application rates vary depending on concrete internal relative humidity as measured per ASTM F 2170. Additional coats and/or thickness may be required to seal rough and/or porous concrete surfaces. To assure a water vapor transmission below 2 pounds per 1,000 ft<sup>2</sup> of concrete

surface area per 24 hours, apply Madewell Permaseal Platinum at the following minimum rates:

90% - 100% Rh: 75 ft<sup>2</sup> per gallon  
< 90% Rh: 100 ft<sup>2</sup> per gallon

Slabs on grade with an effective vapor barrier and all concrete less than 28 days old must be treated at 75 ft<sup>2</sup> per gallon regardless of concrete internal Rh. Elevated slabs (not in contact with soil) may be treated at 100 ft<sup>2</sup> per gallon regardless of concrete internal Rh.

Madewell Products Corporation does not recommend the use of calcium chloride testing as a basis for determining application rates.

#### PHYSICAL PROPERTIES:

**Water Vapor Transmission** per ASTM D 1653 at 0% Rh versus 90% Rh @ 100° Fahrenheit, grains/ft<sup>2</sup>/hr: 0.22 - Equal to 0.75 pounds per 1,000 ft<sup>2</sup> per 24 hours under these conditions.

**Alkalinity Resistance:** Insensitive to alkaline environment up to pH 14 (ASTM D 1308)

**Compressive strength:** >13,000 psi (ASTM D 695)

**Flexural Strength:** > 12,500 psi (ASTM D 790)

**Tensile Strength:** > 6,500 psi (ASTM D638)

**Durometer Hardness:** 98 (ASTM D 2240)

**Adhesion to Concrete:** > 1,000 psi\* (ASTM D 7234)

\*Pull-off results are dependent on substrate tensile strength. 100% concrete cohesive fracture is a typical failure mode.

#### PACKAGING:

Normally stocked in 4.5 gallon two component kits. Larger and smaller kits are available on special order.

**SUITABILITY OF SUBSTRATES:**

Madewell Permaseal Platinum should only be applied to concrete that has been mixed, placed, finished and cured in accordance with the principals outlined in American Concrete Institute Committee report 201: Guide to Durable Concrete. Concrete surfaces must have a minimum compressive strength of 3,000 psi.

It is recommended that concrete surfaces – especially older slabs with unknown service history - be tested for deficiencies such as Alkali Silica Reaction (ASR) and/or the presence of contaminants (e.g. unreacted water soluble silicates, calcium chloride, sulfur compounds, hydrocarbons and/or other organic and/or inorganic contaminants) that might interfere with the performance of Madewell Permaseal Platinum.

Do not apply Madewell Permaseal Platinum to any surface that has been previously treated with a surface or penetrating type sealer of any kind.

Madewell Products Corporation recommends testing and evaluation of concrete for deficiencies, contaminants and/or the presence of previously applied sealer prior to the installation of Madewell Permaseal Platinum. Such testing and evaluation should be performed by properly qualified persons or organizations.

**JOBSITE MOCKUP:**

Because concrete substrates vary substantially from one project to another, Madewell Products Corporation recommends that a jobsite mockup be installed prior to full scale performance of the work. The installation of a jobsite mockup will not determine the suitability of the concrete substrate per the previous section. It is, however, useful for assessing surface preparation methods, the final surface texture of the applied Madewell Permaseal Platinum, coating spread rate, and anticipated adhesion strength and post installation vapor transmission rate.

Do not proceed with performance of the work if jobsite mockup pull off testing performed in accordance with

ASTM D 7234 results in values less than 350 psi and/or if the results are less than 100% concrete cohesive fracture failure mode.

**SURFACE PREPARATION:**

After determining that surfaces are suitable for application of Madewell Permaseal Platinum as outlined above, pre-prepare all surfaces by removing surface contaminants such as old coatings, adhesives, curing compounds, dirt, efflorescence, grease and similar substances. Surface contaminants must be removed by any effective combination of detergent scrubbing, pressure washing, high pressure water blasting, grinding and/or scarifying.

Acid etching is not recommended for removal of surface contaminants prior to surface preparation or as a method of surface preparation.

Prepare all surfaces by shotblasting or abrasive blast cleaning to a minimum International Concrete Repair Institute Concrete Surface Profile #3 condition (ICRI CSP #3). Small areas (less than 5% of total surface area) may be prepared by surface grinding followed by needle scaling or scarifying to a minimum ICRI CSP 3 condition.

Surfaces to receive Madewell Permaseal Platinum must have a uniform profile and must be sound, clean, and free of all dust and spent abrasives.

In addition, surfaces must be open, porous and absorptive so that Madewell Permaseal Platinum will penetrate properly and bond tightly. Prepared surfaces may be spot checked to determine that they are open, porous and absorptive by placing a few drops of distilled water on the surface. The water should not “bead up” but should readily penetrate into the concrete. Note that this spot test is not an acceptable alternative to inspecting and evaluating the substrates for suitability as outlined previously.

**CRACKS AND EXPANSION JOINTS:**

Madewell Permaseal Platinum is a rigid barrier epoxy coating and is not designed to bridge static or moving cracks in concrete substrates. Cracks

and expansion joints should be routed to a depth and width suitable for the anticipated movement of the crack or joint. All vertical surfaces on routed cracks and joints should be prepared in accordance with the section title “Surface Preparation” and coated with Madewell Permaseal Platinum in accordance with the instructions provided herein. Note: Completely coat the vertical surfaces of all joints and cracks but do not coat or flood the bottoms of joints or cracks with Madewell Permaseal Platinum because this may prevent the joint or crack from moving.

After installing Madewell Permaseal Platinum, treat joints and cracks per the owner's requirements and/or in accordance with the requirements of the subsequently applied flooring materials. This is sometimes accomplished using backer rod and elastomeric sealant.

**APPLICATION ENVIRONMENTAL CONDITIONS:**

Substrate temperature must be between 50° and 90° Fahrenheit and must be at least 10° above the dew point during application of Madewell Permaseal Platinum. Ambient air must likewise be between 50° and 90° Fahrenheit. For best results, Madewell Permaseal Platinum should be applied when concrete surface temperatures are stable or dropping slightly to avoid outgassing as a result of expansion of entrapped air within the concrete which may result in pinholes and/or craters in the coating film.

**PRIMING:**

The use of a primer is not typically required. However, priming may be advisable in the case of highly porous and/or weak concrete surfaces which absorb an inordinate amount of Madewell Permaseal Platinum vehicle/binder.

Concrete surfaces may be primed with **MADEWELL 927** Penetrating Epoxy Primer/Sealer prior to application of Madewell Permaseal Platinum. See Madewell 927 Product Data sheet for mixing and application instructions.

**MIXING:**

This is a two component system. Mix components at a volume ratio of 2 parts A to 1 part B. All components (liquids A and B) should be at room temperature prior to mixing. Pour pre-measured quantities of both components into a clean container and blend thoroughly using a power agitator, such as a Jiffy® mixer and a high strength industrial drill, for 3 minutes. Be sure to mix all material on the sides and bottom of the container. Do not mix more material than can be used within stated working times.

**WORKING TIME:**

Approximately 45 minutes at 70° F. The working time will be extended somewhat at lower temperatures and shortened at higher temperatures.

**THINNING:**

**DO NOT THIN Madewell Permaseal Platinum or (if used) Madewell 927 Primer with any solvent of any kind.** Use lacquer thinner, methyl ethyl ketone or xylene for cleaning tools only.

**APPLICATION:**

Madewell Permaseal Platinum must be applied directly to properly prepared concrete and must never be applied over previously applied sealers, coatings or contaminants. Contact Madewell Products Corporation for specific instructions if you wish to apply Madewell Permaseal Platinum to cementitious underlayments.

Madewell Permaseal Platinum is typically applied using a gauge rake or squeegee followed by backrolling with a 3/8" nap roller to work the product thoroughly into the concrete substrate. Alternately, Madewell Permaseal Platinum may be applied by airless spray followed by backrolling with a 3/8" nap roller. Contact a Madewell technical representative for specific equipment recommendations and sources.

Madewell Permaseal Platinum is a semi-self leveling coating. As such, it and will tend to fill in low spots within the surface profile. Concrete with a surface profile > CSP 3 will require ad-

ditional coating material to provide sufficient film thickness above the peaks of the surface profile to properly prevent moisture vapor transmission.

Concrete substrates that are extremely porous may absorb large amounts of the coating liquids leaving only a thin film of pigment and binder on the concrete surface. Areas such as this usually appear dry and flat. Any thin, dry and/or flat areas such as this will require an additional coat of Madewell Permaseal Platinum to properly seal the surface.

**TOPCOATING PERMASEAL PLATINUM:**

Always test the adhesion and compatibility of topcoatings, cementitious underlayments, patching, skimcoating and/or adhesives to be applied over Madewell Permaseal Platinum.

The use of solvent based coatings and/or adhesives is not recommended because solvents may penetrate and become entrapped in the Madewell Permaseal Platinum resulting in failure of the system. Because of this, water based or 100% solids adhesives and/or coatings are recommended. However, care must be used to select adhesives and/or coatings that can be applied to a non-porous substrate. Note that some adhesives must only be applied to a porous substrate and will not cure or dry properly if applied to a non-porous substrate such as Madewell Permaseal Platinum.

Depending on substrate profile and application technique, the final surface of installed Madewell Permaseal Platinum may not be acceptable for some flooring materials. If it is necessary to use a self leveling underlayment or any kind of patching or skim coating product before installation of the final floor, it is recommended that this be installed over the Madewell Permaseal Platinum. Contact the manufacturer of the self leveling underlayment, patching or skim coating product for instructions regarding how to apply their product(s) to a non-porous substrate. Do not sand the surface of Madewell Permaseal Platinum to achieve a smooth surface.

Some extraordinarily thick topping materials such as epoxy terrazzo or cementitious underlayments and/or toppings require a sand broadcast finish for proper adhesion or bond. This type of sand broadcast finish can be accomplished by applying an additional thin coat (8 to 10 mils) of Madewell Permaseal Platinum into which the selected grade of abrasive is broadcast while the Permaseal epoxy is in its uncured state. Contact the manufacturer of the terrazzo or topping for specific recommendations.

**APPLYING A SECOND COAT:**

If it is necessary to apply a second coat of Madewell Permaseal Platinum to increase mil thickness or to repair coating film defect, the second coat should be applied within 24 hours to assure proper adhesion between coats. If more than 24 hours elapse between coats, the previous coat should be sanded lightly to assure proper adhesion.

**QUALITY CONTROL:**

Proper film thickness can be assured by controlling and documenting the application spread rate of the material as outlined in the section titled "Application Rates". Application thickness can be verified by destructive means per ASTM D 4138 or by the use of non-destructive ultrasonic gauges per ASTM D 6132.

Completed work must be carefully visually inspected for holidays such as pinholes, craters and missed spots. Completed work must also be carefully visually inspected for thin spots and/or dry areas. Holidays, pinholes, craters, missed spots and thin spots must be repaired by applying an additional coat of Madewell Permaseal Platinum per the previous section titled "Applying a Second Coat".

Proper adhesion of finished work may be verified using a Madewell Adhesion tester in accordance with ASTM D 7234. Pull-off results are dependent on substrate tensile strength, however, 100% concrete cohesive fracture is a typical failure mode. Minimum acceptable adhesion result is 350 psi and

100% concrete cohesive fracture failure.

**TECHNICAL ADVICE:**

Madewell Products Corporation can assist with on-site technical service to help assure proper installation of Madewell Permaseal Platinum. Madewell technical representatives can provide advice regarding mixing, application, spread rates and performance of quality assurance documentation and testing.

Madewell technical representatives are not authorized to direct or control the quality or performance of the work.

Madewell Products Corporation does not perform testing or evaluation of concrete substrates, however, we can assist customers in obtaining these services.

**CURE TIME:**

Foot traffic: 12 hours at 70° F.

**CLEAN UP:**

Use lacquer thinner, methyl ethyl ketone or xylene for cleaning tools only. Skin should be cleaned using warm soapy water or commercial hand cleaner. **DO NOT THIN Madewell Permaseal Platinum or (if used) Madewell 927 Primer with any solvent of any kind.**

**DELIVERY AND STORAGE:**

Check containers for damage and verify quantities before accepting ship-

ments. Store components in sealed containers in dry environment at moderate temperature conditions (40° F to 80° F).

**SHELF LIFE:**

1 year, subject to re-inspection thereafter.

**SAFETY:**

**KEEP OUT OF REACH OF CHILDREN.**

**FOR INDUSTRIAL USE ONLY.**

MADEWELL Permaseal Platinum contains epoxy resins and amine hardeners that MAY CAUSE EYE OR SKIN IRRITATION AND/OR SENSITIZATION. Adequate health and safety precautions should be observed during all storage, handling, use and drying periods. For best results and safest usage, user is specifically directed to consult the current "Material Safety Data Sheet" for this product. When using this product in a confined space or closed area, consult the current OSHA or ANSI bulletins on safety requirements. Do not take internally. If swallowed, call a physician immediately. Keep away from open flame and keep containers tightly closed when not in use.

**PRODUCT WARRANTY**

All technical data, recommendations and services are rendered by the Seller gratis. They are based on technical

data which the Seller believes to be reliable and are intended for use by persons having skill and knowledge, at their discretion and risk. Seller assumes no responsibility for results obtained or damages incurred from their use by the Buyer whether as recommended herein or otherwise. Such recommendations, technical advice or services are not to be taken as a license to operate or intended to suggest infringement of any existing patent. MADEWELL PRODUCTS CORPORATION MAKES NO GUARANTEE OR WARRANTIES EXCEPT AS OTHERWISE PROVIDED IN WRITING, AND DISCLAIMS ANY AND ALL WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

**AVAILABLE 10 YEAR WARRANTY**

Madewell Products Corporation can provide a limited 10 year warranty covering Madewell Permaseal Platinum and all adhesives, leveling materials and flooring materials applied over Madewell Permaseal Platinum when Madewell Permaseal Platinum is installed in strict accordance with the directions outlined herein by a certified applicator in commercial or industrial applications. Contact Madewell Products Corporation for details.

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