

Madewell® Permaseal Platinum™

Low Permeability Epoxy Coating System



FEATURES/BENEFITS

EXCEPTIONAL WATER VAPOR BARRIER	FAST SETTING & LOW ODOR
SUITABLE FOR MOST FLOORING SYSTEMS	QUICK & SIMPLE INSTALLATION
SUPERIOR IMPACT RESISTANCE	AVAILABLE 10 YEAR WARRANTY
ABRASION RESISTANT	ABSENT OF VOLATILE SOLVENTS (0 VOC'S)

PRODUCT DESCRIPTION

MADWELL 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.

MADWELL 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 downtime.

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

PRODUCT DATA

COMPOSITION:

100% solids, low-permeability epoxy coating.

FINISH:

Gloss.

COLOR:

Amber/semitransparent (depends on thickness and porosity of substrate).

APPLICATION RATES:

Typically 16 mils in one coat. Consult a Madewell Technical Representative for specific recommendations.

MADWELL Permaseal Platinum will reduce water vapor emission to less than 3 pounds per 1,000 square feet (ft²) of concrete surface area per 24 hours and will 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 thick-

ness may be required to seal rough and/or porous concrete surfaces. To assure a water vapor transmission below 2 pounds per 1,000 ft² of concrete surface area per 24 hours, apply MADWELL Permaseal Platinum at the following minimum rates:

90-100% relative humidity (Rh): 75 ft² per gallon

<90% Rh: 100 ft² per gallon

Slabs on grade with an effective vapor barrier and all concrete less than 28 days old must be treated at 75 ft² per gallon regardless of concrete internal relative humidity. Elevated slabs (not in contact with soil) may be treated at 100 ft² per gallon regardless of concrete internal relative humidity.

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

PACKAGING:

4.5 gallon, two component kits standard; special packaging available.

SUITABILITY OF SUBSTRATES:

MADWELL Permaseal Platinum should only be applied to concrete that has been mixed, placed, finished, and cured in accordance with the principles 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 histories – 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 MADWELL 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 evaluating concrete for deficiencies, contaminants, and/or the presence of a previously applied sealer prior to the installation of **MADEWELL Permaseal Platinum**. Testing and evaluations 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, 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 a 100% concrete cohesive fracture failure.

SURFACE PREPARATION:

After determining that surfaces are suitable for the 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 the 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 (ICRI CSP #3) condition. Small areas (less than 5% of the 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 absorbent 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 absorbent 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 titled “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.

PRIMING:

MADEWELL Permaseal Platinum is normally self priming. As such, 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. In such cases, concrete surfaces may be primed with a thin coat of **MADEWELL 927™** Penetrating Epoxy Primer/Sealer prior to the application of a full body coat of **MADEWELL Permaseal Platinum**.

MIXING RATIO:

Mix components at a volume ratio of 2 parts A to 1 part B. Whenever possible, avoid mixing partial kits.

MIXING:

This is a two component system. Each component (liquids A and B) should be at room temperature (73° F) prior to mixing. The entire contents of each component should be thoroughly mixed individually before combining separate components together. If it is not possible to mix an entire kit, pour pre-measured quantities of each component into a clean container and blend thoroughly using a power agitator, such as a Jiffy® mixer, and a high strength industrial drill for a minimum of 3 minutes. 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.

APPLICATION ENVIRONMENTAL CONDITIONS:

Substrate temperature must be between 50° F and 90° F and must be at least

10° F above the dew point during application of MADEWELL Permaseal Platinum. Ambient air must likewise be between 50° F and 90° F. 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 the expansion of entrapped air within the concrete, which may result in pinholes and/or craters in the coating film.

APPLICATION:

MADEWELL Permaseal Platinum must be applied directly to properly prepared concrete and must never be installed over previously applied sealers, coatings, or contaminants. Contact a Madewell Technical Representative for specific instructions if you wish to apply **MADEWELL Permaseal Platinum** over 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.

MADEWELL Permaseal Platinum is a semi-self leveling coating. As such, it will tend to fill in low spots within the surface profile. Concrete with a surface profile greater than an ICRI CSP #3 condition will require additional 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. These thin, dry, and/or flat areas 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** coating, resulting in failure of the system. Therefore, Madewell Products Corporation recommends the use of water based or 100% solids adhesives and/or coatings. 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 it be installed over the **MADEWELL Permaseal Platinum**. Contact the manufacturer of the self leveling underlayment, patching, or skim coating product for instructions on 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 **MADEWELL Permaseal Platinum** is in its uncured state. Con-

tact 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 defects, 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 the per-

formance 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 but can assist customers in obtaining these services.

CURE TIME:

Foot traffic: 24 hours at 70° F.

CLEAN UP:

Use methyl ethyl ketone (MEK), xylene, or a combination of the two to clean application equipment. Skin should be cleaned using warm, soapy water or commercial hand cleaner.

PHYSICAL PROPERTIES:

Water Vapor Transmission @ 0% Rh versus 90% Rh @ 100° Fahrenheit (F)=0.22 grains/ft²/hour, equal to 0.75 pounds per 1,000 ft² per 24 hours. (ASTM D-1653)

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

Compressive strength: >13,000 pounds per square inch (psi) (ASTM D-695)

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

Tensile Strength: >6,500 psi (ASTM D-638)

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.

DELIVERY AND STORAGE:

Check containers for damage and verify quantities before accepting shipments. Store components in sealed containers in a dry environment at moderate temperature conditions (40° F to 80° F).

SHELF LIFE:

1 year, depending on storage conditions, 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, SKIN, RESPIRATORY, OR NERVOUS SYSTEM 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 the Operational Safety and Health Administration (OSHA) or the American National Standards Institute (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 that 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 an approved applicator in commercial or industrial applications. Contact Madewell Products Corporation for details.

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