Exterior Performance Coatings LLC

Distributors of High Performance Industrial Coatings

TECHNICAL DATA- E903M
Water Based Cement Urethane Mortar

PRODUCT DESCRIPTION:
NPE903M is a bio-based three or four component (dependent on color) trowel applied urethane mortar that has outstanding wear performance and can withstand higher heat exposures than typical unmodified urethanes. The product has good thermal shock capabilities and is a good choice for hot wash down areas. The product is resistant to fungi growth and withstands moderate thermal shock, impact, abrasion and chemical exposures.

RECOMMENDED FOR:
Resurfacing areas where a durable shock resistant surface is needed such as commercial kitchens, restrooms and locker rooms, food prep areas, and food and beverage facilities

BENEFITS:
*Seamless hygienic finish with no grout lines
* Low odor, fast installation and fast cure.
* thermal shock and chemical resistance.

SOLIDS BY WEIGHT:
Approximately 98% solids (liquids mixed with aggregate)

VOLATILE ORGANIC CONTENT:
5 grams per liter

STANDARD COLORS:
Gray, tan and red. (Special colors available with minimum quantities.)

FILM THICKNESS:
Final film thickness varies, dependent on concrete conditions and system used. Typical finished installation thicknesses vary from 1/4" to 3/8" .

COVERAGE PER KIT:
The standard Unit typically yields 23 square feet at approximately 1/4".

PACKAGING INFORMATION / MIX RATIO:
Urethane Cement: Mortar (5.0# part A in a gallon container, not full + 5.0# part B in a gallon container not full + 1 bags blended aggregate at 52# and 1# bag of dry pigment (weights approximate)

SHELF LIFE:
6 months for unopened and properly stored containers.

FINISH CHARACTERISTICS:
Slightly textured finish

COMPRESSIVE STRENGTH:
7,800 psi @ ASTM C-579

TENSILE STRENGTH:
975 psi @ ASTM C-307

BOND STRENGTH:
100% concrete failure @ ASTM D-4541

FLEXURAL STRENGTH:
1,900 psi @ ASTM C-580

HARDNESS:
Shore D = 80 typical

IMPACT RESISTANCE:
160 in. lbs @ ASTM D-4226

RESISTANT TO FUNGI GROWTH:
Passes rating of 1 @ ASTM G-21

VISCOSITY
When mixed, it forms a trowelable paste.

DOT CLASSIFICATIONS:
Not Regulated

HEAT RESISTANCE:
Can withstand up to 200F degrees

CURE SCHEDULE: (77°F)
pot life ……..... 15 minutes
light foot traffic …… 12 hours
heavy foot traffic ..... 24 hours
full cure …….. ..... 7 days

APPLICATION TEMPERATURE:
45-85 degrees F with relative humidity below 85%.)

PRIMER:
None normally required.

TOPCOAT:
Optional.

CHEMICAL RESISTANCE TESTING:
Spot testing per ASTM D1308 for Mustard, Ketchup, Lactic acid, vinegar, and lemon juice were performed and no physical damage to the exposed surface was observed. In 24 hour immersion testing, the following results were observed..

CHEMICAL EXPOSURE	PERFORMANCE
10% acetic acid	passed
30% nitric	passed
Sodium Hydroxide 50%	passed
Sulfuric Acid 30%	passed
Xylene	passed

LIMITATIONS:

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*Color stability or gloss may be affected by high humidity, low temperature, chemical exposure or lighting such as sodium vapor lights. Product is not color or UV stable.
*Do not install on wet concrete.
* Floors should be sloped to drain to prevent standing water or chemicals and spills should be removed as soon as possible to prevent a slipping hazard.
*Proper mixing is important for product performance.
*High heat exposure may discolor the surface.
*Colors may vary from batch to batch. Therefore, use only product from the same batches for an entire job.
*Always apply a suitable test area to evaluate the product performance and suitability prior to undertaking the entire project. Samples are available upon request.
*Mixtures of chemicals and applications with exposures to chemicals at elevated temperatures should be thoroughly evaluated before applying.
*Substrate temperature must be 5^{0}F above dew point.
All new concrete must be cured for at least 15 days prior to application.
*Product is not color stable, expect color change over time.
*See reverse side for application instructions.
*Physical properties are typical values and not specifications.
*See reverse side for limitations of our liability and warranty.

INSTRUCTIONS (NPE903M)

1) PRODUCT STORAGE: Store product in an area as to bring the material to normal room temperature before using. Continuous storage should be between 60 and 90 degrees F. Low temperatures may cause product crystallization. Do Not Freeze.
2) SURFACE PREPARATION: The most suitable surface preparation would be a shot blast to remove all laitance and provide a suitable profile. All dirt, foreign contaminants, oil and laitance must be removed to assure a trouble free bond to the substrate. A test should be made to determine that the concrete moisture content is controlled to acceptable levels, this can be done by placing a 4'X4' plastic sheet on the substrate and taping down the edges. If after 24 hours, the substrate is still dry below the plastic sheet, then the substrate is generally considered suitable for coatings. The plastic sheet testing is also a good method to determine if any hydrostatic pressure problems exist that may later cause disbonding. After surface preparation and before application, repair all bug holes and grind down any projections. Repair all cracks or concrete Imperfections. Surface should have a minimum tensile strength of at least 300 psi @ ASTM D-4541. Surface profile should be CSP 5 or greater per International Concrete Repair Institute guidelines.
3) PRODUCT MIXING: This product is packaged in pre-measured kits. Use the entire kit - do not modify. . It is very important to utilize a proper mixer and paddle to ensure a complete mix and to reduce the risk of introducing excessive air into the mixture. We recommend the use of a MAN-U-FAB M-61 (1 HP) mixer with a 10 gallon pail and TR4-10 mixing arm (www.mixall.com). With the mixer running, pour the part A into the mixing pail. Add the powder pigment bag to the part A liquid and mix for about 15 seconds. Add the part B liquids and mix again for another 15 seconds. Gradually, add all of the contents of the supplied filler part C into the liquid mixture and blend thoroughly until all particles are wetted out, normally about two minutes. Improper mixing may result in product failure. Make sure to apply the product immediately after it is completely mixed
4) PRIMING: No primer is necessary on a properly prepared substrate, however, if concrete outgassing occurs, discontinue application and apply a suitable primer.
5) PRODUCT APPLICATION: Product should only be applied by trained persons experienced in polyurethane concrete flooring applications. To prevent lifting or delaminations, keyways (minimum 5/16" wide x 5/16" deep) must be cut at all terminations, joints, columns, doorways, and drains. It is very important to utilize a proper mixer and paddle to ensure a complete mix and to reduce the risk of introducing excessive air into the mixture. After mixing, spread the mixed material onto the floor at a thickness slightly greater than the desired finish, using a screed box or move the material by hand trowel. Trowel the surface lightly, using a steel finish trowel to smooth the surface. Finish trowel strokes should all be in the same direction. Do not over trowel or overwork the mortar. The material should be troweled to a finished thickness of at least 1/4" to 3/8". For thicknesses greater than 1", add 25# of clean, dry 3/8" pea gravel to the UNIT mixture to help reduce the heat generated during the cure. Immediately roll the surface lightly in no more than two passes with a mohair roller. Excessive rolling or use of a loop roller will reduce slip resistance. NOTE: Late or heavy rolling may induce pinholes. Lay abutting edges within 10 minutes to ensure a clean edge. A "wet edge" installation is imperative during large applications to avoid lines and ridges in the finished floor.
6) RECOAT OR TOPCOATING: Topcoats are optional dependent on desired results. In some areas, a suitable novolac or other types of coatings can be used, depending on specific requirements.
7) CLEANUP: For cleaning any application, equipment, water can be used. The urethane component container is best cleaned with a suitable solvent.
8) FLOOR CLEANING: Caution! Some cleaners may affect the color of the floor installed. Test each cleaner in a small area, utilizing your cleaning technique. If no ill effects are noted, you can continue to clean with the product and process tested.

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9) RESTRICTIONS: Restrict the use of the floor to light traffic and non-harsh chemicals until the coating is fully cured (see technical data under full cure). It is best to let the floor remain dry for the full cure cycle. Dependent on actual complete system application, surface may be slippery, especially when wet or contaminated; keep surface clean and dry.

NOTICE TO BUYER: DISCLAIMER OF WARRANTIES AND LIMITATIONS ON OUR LIABILITY

We warrant that our products are manufactured to strict quality assurance specifications and that the information supplied by us is accurate to the best of our knowledge. Such information supplied about our products is not a representation or a warranty. It is supplied on the condition that you shall make your own tests to determine the suitability of our product for your particular purpose. Any use or application other than recommenced herein is the sole responsibility of the user. Listed physical properties are typical and should not be construed as specifications. ***NO WARRANTY IS MADE, EXPRESSED OR IMPLIED, REGARDING SUCH OTHER INFORMATION, THE DATA ON WHICH IT IS BASED, OR THE RESULTS YOU WILL OBTAIN FROM ITS USE. N0 WARRANTY IS MADE, EXPRESSED OR IMPLIED, THAT OUR PRODUCT SHALL BE MERCHANTABLE OR THAT OUR PRODUCT SHALL BE FIT FOR ANY PARTICULAR PURPOSE. NO WARRANTY IS MADE THAT THE USE OF SUCH INFORMATION OR OUR PRODUCT WILL NOT INFRINGE UPON ANY PATENT.*** *We shall have no liability for incidental or consequential damages, direct or indirect. Our liability is limited to the net selling price of our product or the replacement of our product, at our option. Acceptance of delivery of our product means that you have accepted the terms of this warranty whether or not purchase orders or other documents state terms that vary from this warranty. No representative is authorized to make any representation or warranty or assume any other liability on our behalf with any sale of our products. Our products contain chemicals that may* ***CAUSE SERIOUS PHYSICAL INJURY. BEFORE USING, READ THE MATERIAL SAFETY DATA SHEET AND FOLLOW ALL PRECAUTIONS TO PREVENT BODILY HARM.***

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