



TECHNICAL DATA- NP501 (Epoxy or Novolac) Water Based Epoxy Cement Overlay/Broadcast

PRODUCT DESCRIPTION:

NP501 is a three component trowelable epoxy/cement slurry that has outstanding performance in damp areas and higher heat exposure areas. The product has good thermal shock capabilities and is a good choice for hot wash down areas. The product is available in both a standard Epoxy formulation and a higher chemical resistant Novolac formulation.

RECOMMENDED FOR:

Resurfacing areas where a durable shock resistant surface is needed.

SOLIDS BY WEIGHT:

Approximately 92% solids (liquids mixed with aggregate)

VOLATILE ORGANIC CONTENT:

negligible

STANDARD COLORS:

gray and red

RECOMMENDED FILM THICKNESS:

1/8" to 3/16" (broadcasted systems can yield 3/16" to 3/8")

COVERAGE PER KIT:

The standard kit will yield 41 – 43 square feet @ 1/8"

The standard kit will yield 27 – 28 square feet @ 3/16"

PACKAGING INFORMATION

EPOXY CEMENT: (6.30# part A in a gallon can not full + 8.35# part B in a gallon can + 33# blended aggregate)

NOVOLAC CEMENT: (6.90# part A in a gallon can not full + 8.35# part B in a gallon can + 33# blended aggregate)

MIX RATIO:

EPOXY CEMENT: (6.30# part A + 8.35# part B + 33# aggregate)

NOVOLAC CEMENT: (6.90# part A + 8.35# part B + 33# aggregate)

SHELF LIFE:

1 year for liquids in unopened containers/3 months for aggregate unopened

FINISH CHARACTERISTICS:

Slightly textured/rough finish

COMPRESSIVE STRENGTH:

6,400 psi

TENSILE STRENGTH:

1,300 psi

ADHESION:

400 psi @ elcometer (concrete failure, no delamination)

HARDNESS:

Shore D = 82 typical

THERMAL SHOCK RESISTANCE:

After a seven day cure, samples were held at 5°C for 15 hours and then immediately exposed to 100°C water. This cycle was repeated four times. The samples were then held at 5°C for 15 hours and then immediately exposed to steam for 5 minutes. After the thermal cycle and steam exposure, the surfaces were examined for cracks or damage and the bond strength was tested. The bond test before and after the thermal and steam exposure was greater than 400 psi and there was no damage to the exposed surface observed.

HOT OIL TESTING:

Hot cooking oil at 220°C was placed on a sample in a pool on the surface and allowed to cool to room temperature. No surface damage was apparent and adhesion of the sample was unaffected.

IMPACT RESISTANCE:

Excellent

ABRASION RESISTANCE:

excellent

VISCOSITY (Epoxy Type)

Part A: 6,350cps; Part B: 250 cps (typical values)

When mixed with the part C aggregate, it forms a pourable slurry.

DOT CLASSIFICATIONS:

Not Regulated

HEAT RESISTANCE:

Can withstand up to 300 degrees dry heat exposures

CURE SCHEDULE: (70°F)

pot life – (150 gram mass) 20-30 minutes

tack free (dry to touch) 2-4 hours

light foot traffic..... 6-8 hours

full cure (heavy traffic)..... 2-7 days

APPLICATION TEMPERATURE:

40-90 degrees F with relative humidity below 90%.)

PRIMER:

None normally required unless outgassing problems develop (see reverse).

TOPCOAT:

Intended to be broadcasted with a suitable aggregate or colored quartz aggregate onto the wet slurry – see application details on reverse.

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 in hardness with no recovery period.

CHEMICAL EXPOSURE	SHORE D HARDNESS
Initial (no chemical exposure)	82
10% acetic acid	60
30% nitric	75
Sodium Hypochloride	80
60% perchloric acid	78

*For even increased chemical resistance, select the Novolac option.

LIMITATIONS:

Color stability or gloss may be affected by high humidity, low temperature, chemical exposure or lighting such as sodium vapor lights.

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. *This product is not UV color stable.

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°F above dew point.

All new concrete must be cured for at least 30 days prior to application.

See reverse side for application instructions.

Physical properties are typical values and not specifications.

See reverse side for limitations of our liability and warranty.
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INSTRUCTIONS (NP501)

- 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 or great temperature fluctuations may cause product crystallization.
- 2) **SURFACE PREPARATION:** The most suitable surface preparation would be a fine brush blast (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.
- 3) **PRODUCT MIXING:** This product is packaged with a gallon container of part A (not full) and a gallon container of part B with an aggregate component. Standard packages are in pre-measured kits and should be mixed as supplied in the kit. We highly recommend that the kits not be broken down. Add the part B component to an oversized mixing container first, followed by the part A component. After the two liquid parts are combined thoroughly and streak free, add in the provided aggregate and mix well with slow speed mixing equipment such as a jiffy mixer until the material is thoroughly mixed and uniform in color. After mixing, transfer the mixed material to another pail (the transfer pail) and again remix. The material in the transfer pail is now ready to be applied on the prepared substrate. Remix occasionally to prevent settling of aggregate. Improper mixing may result in product failure.
- 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:** Have the floor as dry as possible without any puddles of water present. If there is excess water on the substrate, take up excess with a suitable vacuum until a near dry condition exists. Then, after the material is thoroughly mixed, pour the material onto the substrate. Either use a trowel to push out and level the material evenly or spread with a gauge rake followed by a loop roller. If there is excessive air from concrete outgassing or from overly aggressive mixing, an air release roller tool can be used before broadcasting. Immediately after the product is applied, broadcast with aggregate to rejection on the wet surface. Remove excess aggregate after the material has cured. Surfaces not broadcasted could have an uneven texture and an orange peel look. Maintain temperatures and relative humidity within the recommended ranges during the application and curing process. Do not apply to cracked or unsound concrete. Do not feather edge.
- 6) **RECOAT OR TOPCOATING:** Except for the aggregate broadcast, topcoats are not recommended. In some areas, a suitable high build novolac coating can be used, depending on specific requirements. If Topcoated, the high heat resistance would be diminished.
- 7) **CLEANUP:** For cleaning any application, equipment, water can be used. The Epoxy 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.
- 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.

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. 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. NO 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.