

**Guide Specification****PART 1 GENERAL****1.1 SUMMARY**

- A. Provide labor, materials, equipment and supervision necessary to install a superior chemical resistant flooring system as outlined in this specification.
- B. The manufacturers application instructions for each product used are considered part of this specification and should be followed at all times.
- C. Related Sections:
 - 1. Section 03 30 00 - Cast-in-Place Concrete
 - 2. Section 07 92 00 - Joint Sealants
 - 3. Section 07 95 00 - Expansion Control

1.2 SYSTEM DESCRIPTION

- A. Novolac 32 shall be a complete system of compatible materials supplied by NEOGARD® to create a superior chemical resistant flooring system.
- B. Novolac 32 shall be designated for application on the specific type of substrate indicated on the drawings.

1.3 SUBMITTALS

- A. Product Data: Submit NEOGARD® product literature and installation instructions.
- B. Project Reference List: Submit list of projects as required by this specification.
- C. Samples: Submit samples of specified superior chemical resistant flooring system. Samples shall be construed as examples of finish only.
- D. Applicator Approval: Submit letter from manufacturer stating applicator is approved to install the superior chemical resistant flooring system.
- E. Warranty: Submit copy of manufacturers standard warranty.

1.4 QUALITY ASSURANCE

- A. Supplier Qualifications: Novolac 32 , as supplied by NEOGARD®, is approved for use on this project.

- B. Applicator Qualifications: Applicators shall be approved to install specified system.

1.5 DELIVERY, STORAGE AND HANDLING

- A. Delivery: Materials shall be delivered in original sealed containers, clearly marked with supplier's name, brand name and type of material.
- B. Storage and Handling: Recommended material storage temperature is 75°F (23.8°C). Handle products to avoid damage to container. Do not store for long periods in direct sunlight.

1.6 PROJECT CONDITIONS

- A. Environmental Conditions:
 - 1. Do not proceed with application of materials when substrate temperature is less than 50°F (10°C). It is recommended to maintain a minimum concrete temperature of 50°F (10°C) for a minimum of 48 hours before, during and after installation, or until cured.
 - 2. Concrete must be free of hydrostatic, capillary or moisture vapor pressure. Substrates in contact with ground must have a properly installed, effective vapor barrier to help prevent potential problems resulting from hydrostatic, capillary or moisture vapor pressure. Moisture content of concrete not to exceed four pounds per 1,000 square feet per 24 hours when tested by the referee or quantitative calcium chloride test method.
 - 3. Do not apply materials unless surface to receive coating is clean and dry.

1.7 WARRANTY

- A. Upon request, NEOGARD® shall offer the manufacturer's standard warranty upon receipt of a properly executed warranty request form.

PART 2 PRODUCTS**2.1 MANUFACTURER**

- A. NEOGARD® Division of JONES-BLAIR® Company, P.O. Box 35286, Dallas, TX 75235, Toll Free (800) 321-6588, Fax (214) 357-7532, www.neogard.com.

2.2 MATERIALS

- A. Novolac 32:
 - 1. Crack and Joint Filler: 70718/70719 flexible epoxy.
 - 2. Fillers: P1934 fumed silica and 86364 blended aggregates.

3. Primer: 70714/70715 clear epoxy.
4. Novolac: 70704/70705 clear or pigmented epoxy.
5. Sealant: 70991 or other polyurethane sealant approved by NEOGARD®.
6. Texture: 86500 Neogrip Spheres.

2.3 MATERIAL PERFORMANCE CRITERIA

- A. Typical performance requirements of cured 70704/70705 novolac epoxy used on this project are:

PERFORMANCE REQUIREMENTS OF CURED FILM		
PHYSICAL PROPERTIES	TEST METHOD	RESULTS
Compressive Strength	ASTM D695	10,000 psi
Tensile Strength	ASTM D638	8,500 psi
Elongation	ASTM D638	6%
Flexural Strength	ASTM D790	11,800 psi
Flexural Modulus	ASTM D790	134,000 psi
Shore D Hardness	ASTM D2280	84
Adhesion	ASTM D4541	300 psi
Taber Abrasion (cs17)	ASTM D4060	40 mg/1,000 rev
Water Resistance	ASTM D570	0.15%
MVT @ 10 mils	ASTM E96	0.15 Perm
Flame Spread	ASTM D2843	Class "A"
Smoke Density Rating	ASTM D2843	36.3%

2.4 MIXES

- A. Comply with manufacturer's instructions for mixing procedures.
- B. Carefully measure and mix the components together.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify that the work done under other sections meets the following requirements:
 1. That the concrete substrate surface is free of ridges and sharp projections, sound and dry.
 2. That the concrete was cured for a minimum of 28 days (minimum of 3,500 psi compressive strength). The use of concrete curing agents, if any, shall be of a sodium silicate base only; others require written approval from NEOGARD®.
 3. That damaged areas of the concrete substrate be restored to match adjacent areas. Use 70714/70715 epoxy and oven-dry silica aggregate approved by NEOGARD® for filling and leveling at a ratio of one part epoxy mixed with four parts aggregate by volume.

3.2 PREPARATION

- A. Protection:
 1. Protect adjacent surfaces from damage resulting from work of this trade. If necessary, mask and/or

cover adjacent surfaces, fixtures, equipment, etc. by suitable means.

2. Provide a suitable work station to mix the coating materials.

B. Surface Preparation:

1. Cleaning: Surfaces contaminated with oil or grease shall be vigorously scrubbed with a power broom and a strong, non-sudsing detergent. Thoroughly wash, clean and dry. Areas where oil or other contaminants penetrate deep into the concrete may require removal by mechanical methods.
2. Steel shotblast the surface to remove surface contaminants. Proper care and procedure should be taken to leave the concrete surface as unopened as possible. An improper steel shotblast can cause "pinholes" in concrete surfaces, which can result in blister problems during the application of the superior chemical resistant flooring system. Note: Shotblasting does not remove deep penetrating oils, grease, tar or asphalt stains. Proper cleaning procedures should be followed to insure proper bonding of the epoxy flooring.
3. Non-moving Cracks: After shotblasting, fill all non-moving cracks with 70714/70715 epoxy mixed with P1934 fumed silica to form a paste. The mix ratio is one part 70714/70715 epoxy to 2 (up to 3) parts P1934 fumed silica by volume.
4. Moving Cracks or Control Joints: Route all large cracks, remove dust and debris, and fill flush with 70718/70719 flexible epoxy.
5. Moving Control Joints: Seal secondary control joints with 70991 sealant. Re-incorporate expansion joints and control joints into flooring system if conditions require. Consult NEOGARD® for details on moving cracks, expansion joint details and moving control joints.
6. Surface Condition: Concrete must be free of hydrostatic, capillary or moisture vapor pressure. Substrates in contact with ground must have a properly installed, effective vapor barrier to help prevent potential problems resulting from hydrostatic, capillary or moisture vapor pressure. Moisture content of concrete not to exceed four pounds per 1,000 square feet per 24 hours when tested by the referee or quantitative calcium chloride test method.
7. Do not apply materials unless surface to receive coating is clean and dry.

3.3 APPLICATION

- A. Primer: Mix 70714/70715 clear epoxy at a ratio of 2:1 by volume for three minutes. Apply at a rate of 200 square feet per gallon (8 mils DFT) to prepared substrate. Primer should be tack free before applying base coat.
- B. Base Coat: Mix 70704/70705 novolac epoxy at a ratio of 3:2 by volume for three minutes. Apply at a minimum rate of 100 square feet per gallon (16 mils

DFT) to prepared substrate and allow to cure 8 to 12 hours @ 70°F (21.1°C) or until tack free.

- C. Topcoat: Mix 70704/70705 novolac epoxy at a ratio of 3:2 by volume for three minutes. Apply at a minimum rate of 200 square feet per gallon (8 mils DFT) and allow to cure 24 hours @ 70°F (21.1°C) before allowing foot traffic.
- D. Optional Neogrip Textured Finish: To achieve a limited slip-resistant surface, a second topcoat of 70704/70705 novolac epoxy must be applied. Add 12 to 18 ounces by volume of Neogrip spheres to three gallons of 70704. Mix the three gallons of 70704 containing Neogrip spheres to 2 gallons of 70705 for three minutes. The coverage rate for the final topcoat must be applied at 350 to 400 square feet per gallon to yield an average nominal thickness of 4 mils WFT. Note: Installing the

textured finish thicker than 4 mils WFT will cause the Neogrip Spheres to sink into the 70704/70705 epoxy coating, thus eliminating the desired slip-resistant texture.

3.4 CLEANING

- A. Remove debris resulting from completion of coating operation from the project site.
- B. Reference Seamless Flooring Systems Manual for typical cleaning methods.

3.5 PROTECTION

- A. After completion of application, do not allow heavy traffic on coated surfaces for a period of at least 24 hours at 75°F (23.8°C), or until completely cured 7 days @

END OF SECTION

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