**Architect Specifications**

**NeverStrip Floor Coatings Tile and Grout Flooring Restoration** **09 67 23.13**

This guide specification is intended to be used by a qualified construction specifier is  
the intended user of this guide specification. Appropriate modifications are expected.

The guide specification uses the term "Architect." Change the term to match the appropriate design professional. Notes for review by the specifier are set off from specification text by rows of asterisks. Optional text requiring a selection is enclosed within brackets, e.g.,"Color shall be [gray] [white]." Items requiring input specifier input are enclosed within brackets, e.g., "Color: [ \_\_\_\_\_\_\_ ]." Delete specifier notes and

non-applicable optional text in final specification. Retain one Section number and  
title below and revise footer Section number and Section title to match.

**Guide Specification 09 01 60.91 – Polyurethane Floor Coatings**  
  
**Part 1 General Summary**  
  
**1.01 Section Includes**

**A.** Section includes: Polyurethane Floor Coatings.

**1.02 Action Submittals**

**A.** Submit according to Conditions of the Contract and  
Division 01 Specification Sections

**B.** Product Data: For each product indicated.

**C. LEED Submittals:**

*Retain the following subparagraph if LEED-NC or LEED-CI certification is required.*

1) Product Data for Credit IEQ 4.3: For polyurethane floor coatings,  
including VOC content

*Retain the following subparagraph if LEED for Schools certification is required.*

**2)** Laboratory Test Reports for Credit IEQ 4.3: For polyurethane floor coatings, documentation indicating that they meet the testing and product requirements of the California Department of Health Services' ”Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers, including 2004 Addenda.”

**D.** Samples for Verification: 4 inch square samples, to demonstrate finish  
of polyurethane floor coatings.

**1.3 Informational Submittals**

**A.** Applicator Certificate: Manufacturer certificate for applicator, complying  
with requirements.

**B.** Certification by manufacturer that products supplied comply with requirements indicated that limit amount of VOCs in polyurethane floor coating products.

**1.4 Closeout Submittals**

**A. Maintenance Data:** For including in maintenance manuals specified  
in Division 01.

**1.5 Quality Assurance**

**A. Applicator Qualifications:** An applicator certified by the manufacturer  
for application of specified polyurethane floor coating system.

**B. Single-Source Responsibility:** Obtain products from same source  
throughout project. Specify field sample panels to demonstrate that materials and workmanship produce acceptable appearance.  
*Delete paragraph if field samples are not required.*

**C. Field Samples:** Locate at site and obtain approval before start of final work.

1)Apply to 16 sq ft loor area to achieve dry film mil thickness at location selected by Architect.  
  
2) Demonstrate range of finishes and workmanship, including curing procedures.

3) Verify adhesion of polyurethane coating to flooring surface.  
  
**Do not proceed if polyurethane coating does not adhere to flooring surface.**

4) Test slip-resistance coefficients of friction compliance with requirements by  
slip-meter testing according to ASTM D 2047.

5) Accepted field samples provide standard for comparison with remaining work.

6) *[Remove field samples when directed.]  
[Approved field sample may become part of the Work  
if undisturbed at completion of project.]*

7) **Pre-installation Conference:** Conduct conference at project site  
complying with requirements in Division 01 Section  
“Project Management and Coordination.”

**1.6 Deliveries, Storage and Handling**

**A.** Deliver and store materials in original packages with unbroken  
seal and labels intact.

**B.** Store in clean, dry and protected location, to manufacturer requirements.

**1.7 Field Conditions**

**A.** **Environmental Conditions:** Comply with manufacturer instructions for  
range of ambient temperatures and environmental conditions required to apply polyurethane floor coatings. Apply polyurethane floor coatings with indoor temperatures of air, substrate, and material are between 55 and 80 degree F.  
Do not apply polyurethane floor coatings when relative humidity exceeds 80 percent.

**Part 2 Products**

**Performance Requirements**

**A. VOC Content of Interior Curing and Sealing Compounds:**

Retain the following paragraph and subparagraph if LEED-NC or LEED-CI certification is required.

1) Provide products that do not exceed the VOC content limits established  
in South Coast Air Quality Management District (SCAQMD) Rule 1113, Architectural Coatings, rules in effect on January 1, 2004.

Retain the following paragraph and subparagraph if LEED for Schools certification is required.

2) Provide products that comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers, including 2004 Addenda."

**2.2 Polyurethane Floor Coatings**

**A. Polyurethane Floor Coatings:** Two component high performance polyurethane floor coating, non-yellowing, gloss, satin or matte, low odor, chemical and  
esilientstain-resistant, mar and abrasion resistant, formulated for resilient and non-resilient flooring including ceramic, quarry tile and porcelain.

**B. Products:** NeverStrip Floor Coatings; Gloss, Satin and Matte

**C. System Physical Properties:** Provide polyurethane floor coatings with physical properties equal to or better than:  
  
**1) Gloss at 60-Degree Angle:** ASTM D 16: Up to 80 gloss units and Matte  
at less than 40 gloss units with Satin in between.

**2) Flash Point:** Greater than 120 deg F.

**3) Weight, Solids:** 45 percent plus or minus 3 percent, catalyzed and reduced;

**4) Volume, Solids:** 43 percent plus or minus 3 percent, catalyzed and reduced;

**5) Freeze Thaw Stability:** 5 cycles, no change.

**6) VOC Content:** Not more than 100 g/L (.10lbs/gallon) for  
NeverStrip Gloss, Satin and Matte

**D. System Performance Properties:** Provide polyurethane floor coatings with performance properties equal to or better than:

**1) Adhesion, ASTM D 3359:** Average results, 5B, 0 percent removed.  
**2) Abrasion Resistance:** ASTM D 4060: 55 mg loss at 1000 cycles.

**3) Hardness, ASTM D 3363:** Gouge, F; Scratch, 2B.

**4) Chemical Resistance, ASTM D 1308:** Excellent.

**5) Detergent Resistance, ASTM D 3207:** Excellent rating.

**6) Scrub Resistance, ASTM D 2486:** Excellent rating.

**7) Slip Resistance, ASTM D 2047:** Greater than 0.50 COF.

**2.3 Accessory Materials and Equipment**

**A. Brushes:** Nylon or Polyester

**B.** Disposable booties and nitrile, chemical resistant gloves

**C.** Manufacturer recommended protective materials and equipment for  
the use of coatings, adhesion promoters and other materials associated  
with floor preparation and coating application

**D. Rollers:** 3/8 inch woven or microfiber nap with phenolic core.

**E. Butyl lined drop cloth:** to protect flooring substrates below mixing  
and preparation space.

**F. Patching and Fill Material:** Product recommended by manufacturer

**G. Ecolab Maxx Durable floor finish stripper:** high-performance  
stripper to remove conventional floor finish, if any, from the tile and grout  
flooring surface.

**H Grout Color Sealer:** NeverStrip Color Sealer: one-part acrylic color sealer  
for cement/sand based grout.

**I. Colors:** As selected by Architect.

**J. NeverStrip Deep Clean:** alkaline cleaner for deep cleaning of the

tile and grout floors.

**K. NeverStrip Grout Prep:** acidic cleaner for etching of cement and  
sand based grout.

**L. NeverStrip Color Release:** bond breaking compound to aid in the

removal of NeverStrip Color Sealer from quarry tile, ceramic and porcelain flooring surface.

**M. NeverStrip Ceramic Bond:** adhesion promoter added  
to NeverStrip Gloss, Satin and Matte.

**N. NeverStrip Grip Aggregates for improved traction and/or abrasion resistance:** NeverStrip 180 or 320 Grip (white aluminum oxide) and/or NeverStrip Fine Resin Grip (60-100 mesh polycarbonate aggregate) or NeverStrip Medium Resin Grip (40-60 mesh polycarbonate aggregate).

**O.** Standard 175-rpm floor machine with uneven soft brush or equivalent  
and Windsor Recover 18 squeegee wet/vac or equivalent and/or portable  
or truck mounted rinse and reclaim system or equivalent: for deep cleaning  
of tile and grout floor. Absorbent material on the floor of at least 6 feet to  
capture wet materials from the work area.

**Part 3 Execution**

**3.1 Examination**

**A.** Examine substrates and conditions, with applicator present, for compliance  
with manufacturer requirements.

**B.** Do not proceed until unsatisfactory conditions have been corrected.

**3.2 Floor Preparation**

**A.** Protect surfaces not to be treated, such as metals, wood and other materials with plastic or other appropriate coverings before proceeding.

**B.** Put in place appropriate signage for wet floors and other hazards.

**C.** Apply absorbent material onto the floor immediately adjacent and outside work area for at least 6 feet in length to capture wet materials from exiting work area.

**D.** Repair flooring, as desired, and repair missing grout with actual grout material for larger repairs and pre-mixed sanded grout for smaller applications.

**E.** Prepare and clean substrates according to manufacturer instructions.

**F.** Verify flooring substrates including grout are free of acrylic compounds

by removing finishes using methods recommended by manufacturer.

Rinse substrate thoroughly with water, ideally with extraction.

**G.** Deep clean surfaces using NeverStrip Deep Clean and Grout Prep.

**H.** Apply NeverStrip Color Release over the entire surface of the floor per manufacturer instructions to make it easier to remove NeverStrip Color Sealer from the flooring surface.

**I.** Apply NeverStrip Color Sealer in Architect selected color to the grout lines using manufacturer recommended procedures and materials.

**J.** Remove Color Sealer from the quarry, ceramic or porcelain tile surface, while leaving it in the grout lines, using the manufacturer recommended procedures and materials.

**K.** Rinse flooring surface with water and or water/alkaline mixture until desired  
pH of 6-8 is achieved using litmus paper at multiple locations across the  
tile and grout surfaces.

**L.** Tack floor with 3M Easy Trap Duster and dry vacuum prior to application  
of polyurethane floor coatings.

M. Previously painted or coated surfaces including other urethane coatings:  
Abrade surfaces with a screen/sand paper with 80 to 150 grit screen or sand paper depending on coating. Follow manufacturer recommended adhesion tests to verify that polyurethane floor coatings adhere to previously coated surfaces.  
Do not apply to previously painted/coated surfaces where polyurethane floor coatings delaminate from substrate.

**N.** Start of application shall be construed as Applicator's acceptance of substrates.

**3.3 Mixing**

**A.** Materials Preparation: Prepare materials as needed to comply with  
manufacturer instructions.

**B.** Add recommended amounts of adhesion promoter (“Ceramic Bond”) to NeverStrip Gloss, Satin or Matte, as directed by manufacturer before applying the polyurethane floor coating to ceramic, quarry and porcelain tile.

**C.** Add desired amounts of grit aggregate: NeverStrip 180 or 320 Grip;  
Fine Resin Grip or Medium Resin Grip for desired higher traction and or  
abrasion resistance.

**3.4 Application**

**A.** Apply polyurethane floor coatings to clean and dry substrates, according to manufacturer instructions. Provide total dry film thickness of the entire system as recommended by manufacturer:

1) Recommended film thickness for NeverStrip Gloss, Satin and Matte:  
 Wet: 3 to 4 mils; Dry: 1.5 to 2 mils

**3.5 Curing and Protection**

**A.** Cure polyurethane floor coatings according to manufacturer instructions.  
Prevent contamination, while applying and curing floor coating system.

**B.** NeverStrip Gloss, Satin and Matte are air cured with minimum floor and air temperature of 55 degree F to 80 degree F and relative humidity of less than 80%; Minimum 8-hours of dry time after application at 72 F before foot  
and light cart traffic; **Full cure:** 4-5 days.

**C.** Protect polyurethane floor coatings from damage for the remainder  
of the construction period according to manufacturer recommendations.  
Remove temporary coverings just prior to cleaning for final inspection.

**Cleaning and Maintenance**

**A.** Clean polyurethane floor coatings using materials and procedures  
recommended by the manufacturer.

**B**. **Go to:**   
http://www.neverstrip.com/assets/pdf/Cleaning\_Maintenance\_Tile\_and\_Grout\_v1©

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