SECTION 03 54 00- CAST UNDERLAYMENTS
SECTION 09 60 00- FINISHES

Guide Specification for TROWEL APPLIED UNDERLAYMENTS

PART I – GENERAL

1.1 SUMMARY

A. Section Includes: Floor patching and resurfacing required prior to installation of floor coverings. Scope of repair work [is shown on Drawings.] [includes _____].]
B. Related Documents: Drawings, Conditions of Contract, Division 1 - General Requirements and other Contract Documents affect this Section.
C. Related Sections:
    1. See Section 01 10 00- Summary
    2. See Section 09 00 00 - Finishes

1.2 REFERENCES

A. American Society for Testing and Materials:
    1. ASTM C109 Modified - Compressive Strength of Hydraulic Cement Mortars. (F-1)
    2. ASTM C472 Modified – Compressive Strength of Gypsum, Gypsum Plaster, and Gypsum Concrete. (F-1)
    3. ASTM C348 Modified - Flexural Strength of Hydraulic Cement Mortars. (F-1)
    4. ASTM C307 - Tensile Strength of Chemical Resistant Mortars, Grouts, and Monolithic Surfacings.
    5. ASTM C266 -Time of Setting of Hydraulic Cement Paste by Gilmore Needle.
    6. ASTM F1869 – Standard Test Method for Measuring the Moisture Vapor Emission Rate of a Concrete Subfloor.

1.3 SUBMITTALS

A. Submit:
    1. Manufacturer’s product data sheets and installation instructions to prove compliance with specified requirements.
    2. [Sample of manufacturer’s limited warranty and warranty application procedures.]

1.4 QUALITY ASSURANCE

A. Qualifications:

    1. Qualifications: Contractor shall be knowledgeable and well trained in the use of floor underlayment repair materials.

1.5 DELIVERY, STORAGE AND HANDLING

A. Comply with manufacturer’s instructions. Deliver in original, unopened packaging. Store in dry conditions and protect from direct sun exposure, freezing, and extreme heat (greater then 105F.(41C)).

PART II – PRODUCTS

2.1 MANUFACTURER[S]

A. Dependable, LLC phone 1-800-227-3434.
B. [Substitutions: Comply with [Instructions to Bidders] [_____] for substitution request procedures.]

2.2 MATERIALS

A. Primer, for difficult adhesion surfaces only, shall be Dependable Acrylic Embossing Additive or Dependable Latex Liquid. (Difficult adhesion surfaces are covered in the chart in section 3.01.C.)
B. Water shall be clean, cool, and potable. Admixtures as recommended by the manufacturer.
C. Factory blended, latex modified, trowel applied underlayment and floor patch. Available products, subject to compliance with requirements, are limited to the following:
    1. a. Dependable, LLC [White Skimcoat; Polyskim; Skimcrete XL]
    2. Technical Data

2.3 EQUIPMENT

A. Mixing devices: When the material is mixed by drill and paddle method
    1. The drill should be at least ½" in size and capable of generating 150 – 450 RPM.
    2. The paddle may be an epoxy mixer (egg beater / cage), jiffy mixer, rectangular speedy mixer, or other similar tool.

PART III – EXECUTION

3.1 PREPARATION

A. All substrates, regardless of type, must be solid, sound, clean, free of movement and well bonded.
    1. Concrete substrates: All concrete substrates must be sound, clean, and free of dirt, dust, grease, curing compounds, or any other material which might prevent adhesion. Floors must be free of efflorescence and excess moisture. To check moisture, test with a calcium chloride test kit, or by performing a mat test with a rubber-backed mat or plastic sheet taped to the surface.
    2. Wooden substrates: All wooden substrates must be sound, clean and free of dirt, oils, or any other material which may prevent adhesion. Fasten any loose boards. Stripwood floors should be covered with underlayment grade quality board.
    3. Adhesive residue: Using mechanical means, remove loose, brittle, and thick/heavy accumulations to a minimal well bonded residue. Make sure that proper removal and disposal procedures are used when dealing with asbestos containing adhesive.
    4. Existing tile: (Excluding VCT and VAT) Existing ceramic tile, quarry tile, etc. must be well bonded. The surface must also be clean and free of waxes or any other material that might prevent adhesion. Glazed or extremely smooth tile may require abrading the surface by mechanical means in order to achieve a proper bond.
    5. Vinyl floors (*For residential applications only*): Existing resilient floors shall be single layer, fully adhered and well bonded. All foreign matter such as dirt, grease, oil, wax, or any other contaminants which may inhibit bond, must be removed. While the floor is wet, use a cleaning pad and remove any remaining wax or dirt, while scuffing the surface. Rinse thoroughly with water and allow to dry.
    7. Metal floors: Remove all rust, oil, dirt, and contaminants by sand blast, sanding, or other mechanical methods. Sweep and / or vacuum the surface.
A. Ensure underlying surface is free of excess moisture. Hydrostatic pressure or excessive moisture must be corrected. Consult technical assistance.
B. Follow the guidelines on the chart for application over various surfaces.

3.2 PRIMING

A. Difficult adhesion surfaces include: adhesive residue, metal, and ceramic tile. Use a long-handled

roller, soft bristle broom, or paint brush to apply Acrylic Embossing Additive or Latex Liquid. Do not dilute. Apply evenly across the surface, removing any puddles or excess primer. Coverage rates may vary depending upon the substrate and its porosity.

B. Do not apply the underlayment product until the Acrylic Embossing Additive or Latex Liquid is nearly dry and tacky.

3.3 INSTALLATION

A. Mixing
   1. Use a clean mix container. Add the proper amount of powder to the right amount of liquid.
   2. Mix material in a bucket or mix container by hand or with a slow mixer at 150 – 450 RPM using a paddle or similar tool. Mix to a homogeneous lump free consistency. Pay close attention to the working time of the material. Do not attempt to re-temper or add more water to try to extend the pot life.
   3. IN RESIDENTIAL APPLICATIONS ONLY, FOR VINYL SURFACES, AS DISCUSSED IN SECTION 3.01.A.5. When using as an embossing leveler, mix to a lump free trowelable mix. Apply using a flat smooth steel trowel drawing the material across the pattern to be filled at angles to the pattern to ensure an even and complete fill. Allow to dry completely, at least 2 hours before covering.

B. Application
   1. Using a smooth flat trowel, force the product into joints, cracks, holes and deeper fills bearing down on the trowel. Smooth the surface to a thin covering over the prepared substrate.
   2. If the underlayment is to be placed in layers, allow the initial layer to harden, to the point where the material has lost its evaporative moisture. The subsequent layer should be applied within 12 hours.
   3. When the patch has dried, sand or scrape smooth for a perfect finish.
   4. The underlayment can receive floor covering when the product has lost its evaporative moisture.
   5. Direct sunlight, heat, and wind can cause rapid drying of the product which can lead to shrinkage and cracking of cement-based products. To avoid rapid drying, provide protection against these elements.

3.4 PRECAUTIONS AND LIMITATIONS

A. Do not use over particle board, presswood, masonite, chipboard, Luaun, or similar dimensionally unstable materials, or any substrate not well bonded or free of movement.
B. Do not use over single layer stripwood floors.
C. Do not use over petroleum or solvent residue or spills, or other contaminants.
D. Do not use where surface or air temperature falls below 50 F. (10 C.) within 72 hours of installation or when finished floor is subject to freeze within 7 days.
E. For cement-based materials, do not use over gypsum products.
F. If proper bond is in question, apply a sample in an area, allow to dry and inspect for bond. If bond is not achieved, contact Dependable Technical Service at 800-227-3434.

F-1 The modification for ASTM C109, ASTM C472, and ASTM C348consists of air curing the samples. All other procedures are followed.
F-2 When timing is referenced, tests were conducted at 67 - 73 F. (19 - 23 C.) with a relative humidity of 50 – 60%.

END OF SECTION