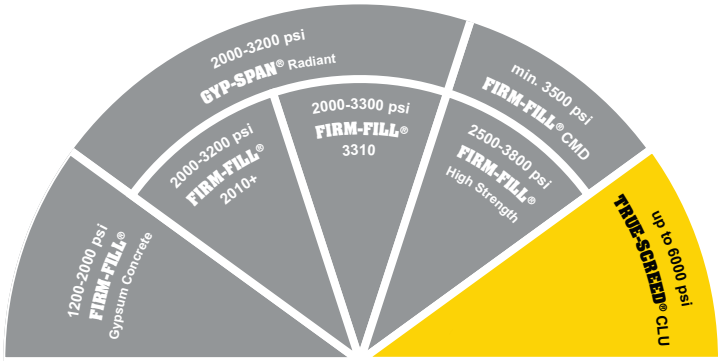
True-Screed®
Recommended Product Specifications



1.1 Summary

A. This section includes underlayment for interior finish flooring.

B. Specify to meet project requirements. The conditions of the Contract (General, Supplementary, and other conditions) and the General Requirements (sections of Division 1) govern the provisions of this section.

C. Related Sections:
1. Section 09 21 16 – Gypsum Board Assemblies

1.2 Referenced Standards

A. The Following Standards And Publications Are Applicable:

1. ASTM C109 Standard Test Methods for Compressive Strength of Hydraulic Cement Mortars.

2. ASTM C33 Standard Specification for Concrete Aggregates (sand aggregate).

3. ASTM D4263 Standard Test Method for Indicating Moisture in Concrete by the Plastic Sheet Method.

4. ASTM E90 Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements.

5. ASTM E119 Standard Test Methods for Fire Tests of Building Construction and Materials.

6. ASTM E413 Rating Classification for Rating Sound Insulation.

7. ASTM E492 Standard Test Method for Laboratory Measurement of Impact Sound Transmission Through Floor-Ceiling Assemblies Using the Tapping Machine.

8. ASTM F2419 Standard Practice for Installation of Thick Poured Gypsum Concrete and Preparation of the Surface to Receive Resilient Flooring.

TRUE-SCREED® CLU Recommended Specifications (Continued)

9. ASTM F2678 Standard Practice for Preparing Panel Underlayments, Thick Poured Gypsum Concrete Underlayments, Poured Lightweight Cellular Concrete Underlayments with Underlayment Patching Compounds to Receive Resilient Flooring.

10. TCNA F 180 Tile Council of North America Installation Handbook.

11. NWFA National Wood Flooring Association Instructions.

12. HACKER Installation Guide.

13. HACKER Drying Conditions Flyer.

14. HACKER Guidelines for Installing Finished Floor Coverings.

1.3 Submittals

A. Product Data: Submit manufacturer's specifications and installation instructions with project conditions and materials clearly identified or detailed for each required product or system.

B. Environmental Information: Submit product data for LEED® Credits MR 4 and MR 5, Recycled Content and Regional Materials. Provide documentation indicating percentages, by weight, of post-consumer and pre-consumer recycled content. Also provide documentation substantiating Regional Materials.

1.4 Quality Assurance

A. Fire Resistance: Provide materials and construction identical to those tested to ASTM E119 by an independent testing agency.

B. Acoustical Performance: For STC; Provide materials and construction identical those tested in assembly indicated according to ASTM E90 and classified according to ASTM E413 by and independent testing agency. For IIC; Provide materials and construction identical to those tested in assembly according to ASTM E492.

C. Manufacturer: All materials, unless otherwise indicated shall be manufactured by HACKER, Newport Beach, California.

D. Installer: Installation of TRUE-SCREED® CLU hydraulic cement underlayment shall be by a Licensed Applicator of HACKER, using mixing and pumping equipment with a water meter approved by HACKER.

E. All materials specified herein shall be approved by HACKER, Newport Beach, CA. All others must receive prior approval.

1.5 Performance Requirements

A. Performance requirements: Compressive strength of TRUE-SCREED® CLU hydraulic cement underlayment shall be up to 6000 psi (approx. 41.4 MPa)

TRUE-SCREED® CLU Radiant Recommended Specifications (Cntd)

1.6 Delivery, Storage And Handling

A. Materials shall be delivered in their original, unopened packages, and protected from exposure to the elements after delivery. Do not allow the bags to get wet.

1.7 Project Conditions

A. Before, during, and after installation of product, building interior shall be enclosed, with adequate ventilation and heat maintained at a temperature above 50°F (10°C) to allow for drying of product.

1.8 Warranty

A. Certification: Upon completion of this portion of the work, and as a condition of its acceptance, deliver to the architect a certificate from HACKER, and signed by the Licensed Applicator, stating that the material used in this work complies with the specified requirements.

PART II: PRODUCTS

2.1 Manufacturers

A. Acceptable Manufacturers, subject to all the requirements contained herein.

1. HACKER, Newport Beach, CA

2.2 Material Description

A. Portland Cement-based Underlayment: TRUE-SCREED® CLU hydraulic cement underlayment, supplied by HACKER.

B. Subfloor Primer: TRUE-SCREED® CLU Floor Primer or approved equal

C. Sand: Washed plaster or masonry sand meeting the requirements of HACKER Sand Guidelines for TRUE-SCREED® CLU hydraulic cement underlayment

D. Water: Potable and free from impurities

E. Sealer: TRUE-SCREED® CLU Sealer, as required for glue down finished floors

PART III: EXECUTION

3.1 Preparation

A. Shot blasting, sandblasting, scarifying or other engineer-approved, non-wet method shall be done on concrete surfaces prior to application (reference ICRI CSP 3+ standards for acceptable profile height). Note: with successful bond test, degree of preparation may vary.

B. TRUE-SCREED® CLU hydraulic cement underlayment is not an encapsulant. Consult local and Federal authorities for proper removal of asbestos.

TRUE-SCREED® CLU Recommended Specifications (Continued)

C. The General Contractor (GC) shall confirm that the subfloor is adequately sound (a deflection limit of L/360) and conditions are suitable for installation of floor underlayment. TRUE-SCREED® CLU Recommended Specifications (cont.)

D. Thoroughly clean surface of all substances that could interfere with the bond of TRUE-SCREED® CLU hydraulic cement underlayment, such as dirt, paint, tar, wax, asphalt, oil, grease, latex compounds, sealers, curing compounds, form release agents, laitance, loose toppings, foreign toppings and adhesive residue.

E. Subfloor shall be properly prepared, sound, dimensionally stable, fully cured and at least 28 days old, and free from hydrostatic pressure.

F. Consult floor covering manufacturer for maximum allowable Moisture Vapor Emission Rate (MVER) and retained moisture in substrate.

G. Ambient room temperature shall be between 50° - 90°F (10° - 32°C) before, during, and after TRUE-SCREED® CLU hydraulic cement underlayment installation.

H. Provide for expansion joints where specified, including the perimeter of the room, columns, supports, and equipment pedestals. Don't bridge joints. Ensure control joints are honored through TRUE-SCREED® CLU hydraulic cement underlayment and primer. Cuts through TRUE-SCREED® CLU hydraulic cement underlayment shall be a minimum of 1/4-inch (6 mm).

I. All dormant cracks in the substrate greater than 1/8-inch (3 mm) shall be repaired to minimize telegraphing through the underlayment.

J. Leak Prevention: All cracks and voids should be filled with a quick-setting patching or taping compound, or equal, where leakage may occur.

K. TRUE-SCREED® CLU Floor Primer is always required over substrates. Prime wood subfloors with one coat of TRUE-SCREED® CLU Floor Primer (diluted 4:1 with water) using one gallon of primer solution (approx. 3.79 L) per 300 ft^2 (approx. 47m^2) or HACKER approved substitute primer.

L. Installation of TRUE-SCREED® CLU hydraulic cement underlayment shall not begin until the building is enclosed, including roof, windows, doors, and other openings.

M. TRUE-SCREED® CLU hydraulic cement underlayment shall be installed before or after the installation of drywall, as specified.

3.2 Installation

A. Mixing Requirements: Refer to Applicator Installation manual for specified water and sand requirements.

1. TRUE-SCREED® CLU hydraulic cement underlayment mix proportions, mix designs and methods shall be in strict accordance with HACKER's recommendations.

TRUE-SCREED® CLU Recommended Specifications (Continued)

B. Application: The minimum thickness of TRUE-SCREED® CLU hydraulic cement underlayment varies with the type of subfloor. Over wood subfloors, a minimum of 3/4-inch (approx. 19 mm) with mechanically attached mesh is required. Over precast or poured-in-place concrete, a minimum of 1/2-inch (approx. 13 mm) is required. Can be featheredged at transitional locations. Maximum recommended thickness is 2-inch (51 mm) in one lift.

C. TRUE-SCREED® CLU hydraulic cement underlayment is suitable for interior applications only and must be covered by a finished floor material.

D. Protection: After installation, temporary wood planking shall be placed by the GC wherever the floor underlayment will be subject to wheeled or concentrated loads.

E. Curing and Drying: TRUE-SCREED® CLU hydraulic cement underlayment is designed to self-cure. Do not use damp cure methods or sealers. Follow the following procedures for optimum performance:

1. Protect the floor from excessive heat and drafts during curing.

2. Avoid walking on surface for 2-3 hours. (Adjust for varying temperature and humidity conditions.)

3. Consult flooring contractor for recommended procedures to test for dryness. Reference Hacker Industries, Inc.'s Drying Conditions Flyer.

F. Sealing: Seal all areas that receive glue down floor goods with TRUE-SCREED® CLU Sealer according to HACKER's specifications. Any floor areas where the surface has been damaged shall be cleaned and sealed regardless of the floor covering used. Where a floor good manufacturer requires a special adhesive or installation, their requirements supersede these specifications.

G. Field Quality Control:

1. Slump Test: TRUE-SCREED® CLU hydraulic cement underlayment shall be tested for slump at the beginning of each installation in order to establish the required slump. Slump tests shall then be taken periodically during installation to verify that the required slump is maintained. Slump tests shall be conducted using a 2-inch by 4-inch (approx. 51 mm by 102 mm) cylinder.

2. Field Samples: Testing shall be done in accordance with modified ASTM C109 testing procedures, using 2-inch (approx. 51 mm) split brass molds. Prior to independent sampling, contact HACKER, to ensure that proper ASTM procedures are followed. If requested prior to installation, test results shall be available to the architect and/or contractor from the Licensed Applicator.

3.3 Preparation For Finished Floor

See Guidelines for Installing Finished Floor Coverings.

Warranty: Hacker Industries, Inc. warrants Hacker Gypsum Floor Underlayments (GFU) to be free from manufacturing defects, and when properly prepared and installed according to approved specified methods, GFU will attain minimum physical specifications as stated by Hacker Industries, Inc.'s most recent literature. Hacker Industries, Inc.'s obligation shall be limited to the replacement of the bagged product only and is subject to notice and inspection requirements. This warranty is in lieu of all other warranties, express or implied, including the warranties of merchantability and fitness for a particular purpose and all other obligations or liabilities.