



**TRUE-SCREED® CLU**



# TRUE-SCREED® CLU

## FLOOR UNDERLAYMENT



- High-strength Portland cement-based floor underlayment
- Resurfaces and repairs cracked concrete floors
- Superior bonding characteristics
- Quick-setting, cost-efficient for thick pours
- Lightweight and crack-resistant
- Creates a flat, durable surface for finished floor coverings
- Installed only by Licensed Applicators across North America

### Product Description

TRUE-SCREED® CLU is a Portland cement-based floor underlayment designed for interior use in commercial, military, and industrial projects. This leveling underlayment helps transform cracked, uneven concrete floors into a smooth, strong surface for floor coverings. TRUE-SCREED® CLU provides compressive strengths up to 6000 psi (41.4 MPa). To help keep projects on schedule and on budget, TRUE-SCREED® CLU can be compatible with finished floor coverings soon after application (depending on thickness and floor covering).

TRUE-SCREED® CLU is mixed on the job site with local sand (per ASTM E-11) or silica sand and water to create a lightweight slurry. A 1/2" thick, the underlayment weighs approximately 4.87 psf.

### Limitations

- Do not use TRUE-SCREED® CLU in exterior locations, below grade, or where continuous exposure to moisture is likely.
- Shall not be used as a wear surface; must be covered by a finished floor covering.
- Structure shall be designed so that deflection does not exceed L/360 live or dead load. Certain floor coverings may have more restrictive deflection limits.
- If installed above a crawl space, subfloor must be protected by a vapor barrier.
- Metal lath reinforcement may be required for applications over a wood subfloor.
- Do not install over substrates containing asbestos.

### Installation

Before, during, and after the installation of TRUE-SCREED® CLU, the building must be enclosed and the temperature maintained at a minimum of 50°F (10°C). Shot-blasting, sandblasting, scarifying or other engineered-approved, non-wet method shall be done on concrete surface prior to application (reference ICRI CSP 3+ standards for profile height). Prior to the installation of TRUE-SCREED® CLU, the subfloor shall be structurally sound (L/360) and broom clean, dry and free from oil, grease, paraffin, laitance, wax or other contaminants. Concrete subfloors shall be 28 days or older and free from hydrostatic pressure. Consult floor covering manufacturer for allowable Moisture Vapor Emission Rate (MVER). MVER shall not exceed 4lbs./1000 sq. ft. per 24 hours 1.8 kg per 92.9m2/24 hours. All dormant cracks above 1/8" shall be repaired to minimize telegraphing. Protect installation areas from direct sunlight and excessive heat.

TRUE-SCREED® CLU can be used over plywood or oriented strand board (OSB) subfloors. Wood subfloors must be properly prepared, bonded, and free from dirt and dust. When applying TRUE-SCREED® CLU to plywood flooring, specifications may require the use of metal lath on top of the primed surface before the application of the underlayment.

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**Installation, cont.**

Prime subfloors per recommended specifications before installing underlayment. Adequate ventilation shall be provided by the General Contractor (GC) to ensure proper drying of TRUE-SCREED® CLU. This product is designed to self-cure; do not use damp curing method and/or sealing compounds. If necessary, the GC shall provide mechanical ventilation. Depending on thickness and drying conditions, the underlayment will dry within 10 to 14 days. To avoid potential problems during the drying process, the GC shall consult Hacker Industries, Inc.'s Drying Conditions Flyer and information contained on Hacker Industries, Inc.'s website for additional information concerning drying of this product.

Finished floor coverings can be installed when the TRUE-SCREED® CLU is completely dry. Consult flooring contractor for recommended procedures to test for dryness and acceptable levels of moisture. Reference Hacker Industries, Inc.'s Guidelines for Installing Finished Floor Coverings. This guideline is not a warranty and shall be used as a guideline only.

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**Product Data**

**Compressive Strengths per ASTM C109 Modified:** up to 6000 psi  
(up to 41.4 MPa)

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**Related Products**

Hacker Floor Primer, Hacker TopCoat SP and Hacker Floor Sealer are available for use with TRUE-SCREED® CLU. Contact Hacker Industries, Inc. at (800) 642-3455 for more information.

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**Warranty**

*Subject to express warranty stated on Hacker Industries, Inc.'s website.*

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**Submittal Approvals**

Project Name: \_\_\_\_\_  
Contractor/Architect: \_\_\_\_\_  
Date: \_\_\_\_\_

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**Product Information**

See HackerIndustries.com for current recommended product specifications and literature.

**WARNING!**

When mixed with water, this product hardens and becomes extremely hot. DO NOT attempt to make a cast enclosing any part of the body using this material. Failure to follow these instructions may cause severe burns that may require surgical removal of affected tissue or amputation of limb. Portland cement is strongly alkaline. Direct contact can be corrosive

and cause severe damage or chemical burns to eyes and wet, moist skin. Avoid contact with eyes and skin. Wear protective glasses and clothing. If eye contact occurs, immediately flush thoroughly with water for 30 minutes and seek medical advice. Inhalation of dust may be corrosive or cause chemical burns or irritation to nose, throat and respiratory tract.

Avoid breathing dust. Use a NIOSH/MSHA-approved dust respirator. Wash thoroughly with soap and water after use. Do not ingest. If ingested, call a

physician. Product safety, call (800) 642-3455. **KEEP OUT OF REACH OF CHILDREN.**

**TRADEMARKS**

FIRM-FILL, GYP-SPAN, Let Our Products FLOOR You and the associated logos are trademarks of Hacker Industries, Inc.

**NOTICE**

We shall not be liable for incidental or consequential damages, directly or indirectly, sustained, nor for any loss caused by application of these goods not in accordance with current printed instruction or for other

than the intended use. Our liability is expressly limited to replacement of defective goods. Any claim shall be deemed waived unless made in writing to us within 30 days from date it was or reasonably should've been discovered.

**SAFETY FIRST**

Follow good safety/industrial hygiene practices during installation. Wear appropriate personal protective equipment. Read MSDS and literature prior to specification and installation.

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**Hacker Industries, Inc.**

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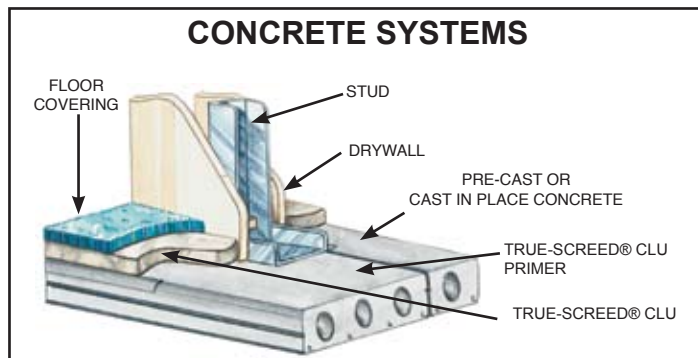
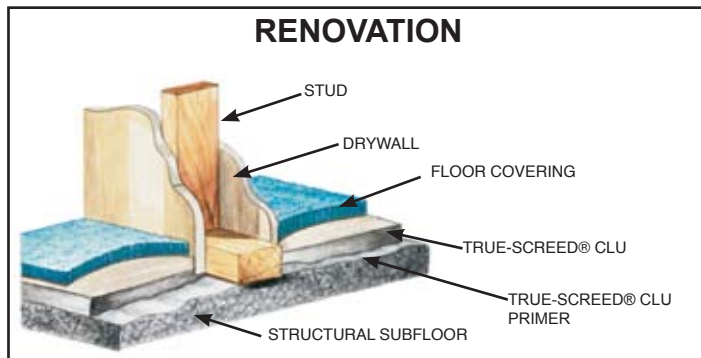
# **True-Screed®**

**Cementitious Leveling Underlayment**

*TRUE-SCREED® CLU is a breakthrough in cement underlayment technology. It delivers optimum performance and durability while providing a way to minimize downtime and keep construction projects on budget and on schedule.*

*TRUE-SCREED® CLU provides a flat, crack-resistant surface for floor coverings in commercial, institutional and renovation projects.*

- **Exceptional compressive strengths; up to 6000 psi**
- **Strong, smooth surface over concrete, precast, or wood**
- **Portland cement-based; Fast drying; No troweling**
- **Cost-effective for thick pours; Meets ASTM F710**
- **Resurfaces cracked, uneven concrete floors**
- **Superior bonding characteristics**
- **Installed by Licensed Applicators**



## Recommended Specifications for TRUE-SCREED® CLU

### PART I GENERAL

#### 1.1 Scope – Specify to meet project requirements

- A. Work included:
  1. **TRUE-SCREED® CLU**
  2. **TRUE-SCREED® CLU Primer**

#### 1.2 Qualifications

- A. **TRUE-SCREED® CLU** shall be installed by trained and Certified, Licensed Applicators of Hacker Industries, Inc., using approved mixing and pumping equipment with a water meter.
- B. **TRUE-SCREED® CLU** shall be delivered in original, unopened bags and protected from exposure to harmful environmental conditions. Do not allow bags to get wet.
- C. Before, during, and after installation of **TRUE-SCREED® CLU**, the building interior shall be a minimum of 50°F (10°C) and a maximum 90°F (32°C).
- D. Compressive strength can be specified up to 6000 psi (41.4 MPa). Flexural strengths can be specified up to 1300 psi (9.0 MPa)
- E. **TRUE-SCREED® CLU** shall be used for interior applications only.
- F. Consult the material safety data sheet (MSDS) for safe handling instructions prior to using product.

### PART II PRODUCTS

#### 2.1 Materials

- A. Cement Underlayment: **TRUE-SCREED® CLU** as supplied by Hacker Industries, Inc.
- B. Sand Aggregate: Sand shall meet the requirements of the **TRUE-SCREED® CLU** Sand Specification.
- C. Water: Cool, potable and free from impurities, not to exceed 70°F (21°C).
- D. Primer: **TRUE-SCREED® CLU Primer**.

#### 2.2 Mix Designs

- A. **TRUE-SCREED® CLU** mix proportions and methods shall be in strict accordance with supplier recommendations.

### PART III EXECUTION

#### 3.1 Preparation

- A. Shot-blasting, sandblasting, scarifying or other engineered-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** is not an encapsulate, consult local and Federal authorities for proper removal of asbestos.
- C. General Contractor (GC) shall confirm the subfloor is structurally sound (L/360) and conditions are suitable for installation of the floor underlayment.
- D. Thoroughly clean surface of all substances that could interfere with the bond of **TRUE-SCREED® CLU**. These include, but are not limited to, dirt, paint, tar, wax, asphalt, oil, grease, latex compounds, sealers, curing compounds, form release agents, laitance, wax loose toppings, foreign substances 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. Consult floor covering manufacturer for maximum allowable Moisture Vapor Emission Rate (MVER) and retained moisture content in substrate. Shall not exceed 4 lbs. per 1,000 sq. ft. per 24 hours (1.81kg per 92.9m<sup>2</sup> /24 hours).
- F. Ambient room temperature and concrete subfloor shall be between 50-90°F (10-32°C) before **TRUE-SCREED® CLU** installation.
- G. Provide for expansion and control joints where specified, including the perimeter of the room, columns, supports and equipment pedestals. Don't bridge joints. Ensure joints are honored through **TRUE-SCREED® CLU** and primer. Cuts in **TRUE-SCREED® CLU** shall be at least 1/4" (6mm) wide.
- H. All dormant cracks greater than 1/8" shall be repaired to minimize telegraphing through the underlayment.
- I. Always prime prepared surface with Hacker approved primer prior to installation of **TRUE-SCREED® CLU**.

- J. Metal lath is required for applications over a wood substrate.

#### 3.2 Application

- A. Scheduling: Application of **TRUE-SCREED® CLU** shall not begin until the building is enclosed, including roof, windows, and doors.
- B. Application: Install **TRUE-SCREED® CLU** at specified thickness by placing contents of bag, sand and water into an approved high-speed mixing device with a water meter. **TRUE-SCREED® CLU** shall be pumped on the floors areas, spreading and screeding to a smooth surface. Protect underlayment from direct sunlight and drafts.
- C. Allow expansion joints to continue through **TRUE-SCREED® CLU**.

#### 3.3 Protection

- A. After installation, temporary wood planking shall be placed by the GC wherever underlayment will be subject to wheeled or concentrated loads.

#### 3.4 Curing and Drying

- A. **TRUE-SCREED® CLU** is designed to self-cure; do not use damp curing method and/or sealing compounds.

#### 3.5 Preparation for Installation of Floor Coverings

- A. Consult finished floor covering manufacturers' recommended specifications.

#### 3.6 Field Quality Control

- A. Slump Test: **TRUE-SCREED® CLU** mix shall be tested for slump as it is being pumped using a 2" by 4" (51mm by 102mm) cylinder and plexiglas.
- B. Field Samples: Cubes shall be tested as recommended by Hacker Industries, Inc. in accordance with ASTM C109 modified. Test results shall be available to the architect and/or contractor upon prior request from applicator.

*Note:* For recommended installation instructions over precast concrete plank, contact Hacker Industries, Inc.



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For the Licensed Applicator in your area, please call our toll-free number, (800) 642-3455

*Note:* For Warranty information, please contact Hacker Industries, Inc. at (800) 642-3455.



# TRUE-SCREED® CLU

## Recommended Specifications

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### **PART I. GENERAL**

#### **1.1 Scope**

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

#### **1.2 Qualifications**

- A. Supplier: Hacker Industries, Inc., Newport Beach, California.
- B. Installer: Installation of TRUE-SCREED® CLU shall be by a trained, Licensed Applicator of Hacker Industries, Inc. using mixing and pumping equipment with a water meter approved by Hacker Industries, Inc.
- C. All materials specified herein shall be approved by Hacker Industries, Inc., Newport Beach, CA. All others must receive prior approval.
- D. Compressive strength shall be specified up to 6000 psi (approx. 41.4 MPa).
- E. Materials shall be delivered in their original, unopened packages, and protected from exposure to the elements before and after delivery and at a minimum temperature of 50°F (10°C). Do not allow bags to get wet. Product shall not be used beyond shelf life.
- F. Certification: Upon completion of this portion of the work and upon request, and as a condition of its acceptance, deliver to the architect a certificate from Hacker Industries, Inc., and signed by the Licensed Applicator, stating that the material used in this work complies with the specified requirements.

### **PART II. PRODUCTS**

#### **2.1 Materials**

- A. Cement Underlayment: TRUE-SCREED® CLU, as supplied by Hacker Industries, Inc., Newport Beach, CA
- B. Subfloor Primer: TRUE-SCREED® CLU Primer or approved equal
- C. Sand: 1/8" (3mm) or less washed plaster or masonry sand
- D. Water: Potable and free from impurities
- E. Hacker TopCoat™ SP (if specified)

#### **2.2 Mix Designs:** See section 3.3

### PART III. PREPARATION

#### 3.1 Surface Preparation

- A. Shot-blasting, sandblasting, scarifying or other engineered-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 is not an encapsulate, consult local and Federal authorities for proper removal of asbestos.
- C. The GC shall confirm the subfloor is structurally sound (L/360) and conditions are suitable for installation of the floor underlayment.
- D. Thoroughly clean surface of all substances that could interfere with the bond of TRUE-SCREED® CLU. These include, but are not limited to, dirt, paint, tar, wax, asphalt, oil, grease, latex compounds, sealers, curing compounds, form release agents, laitance, loose toppings, foreign substances 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. Consult floor covering manufacturer for maximum allowable Moisture Vapor Emission Rate (MVER) and retained moisture content in substrate. Shall not exceed 4 lbs. per 1,000 sq. ft. per 24 hours (1.81kg per 92.9m<sup>2</sup> /24 hours).
- F. Ambient room temperature and concrete subfloor shall be between 50-90°F (10-32°C) before, during and after TRUE-SCREED® CLU installation.
- G. Provide for expansion and control joints where specified, including the perimeter of the room, columns, supports and equipment pedestals. Don't bridge joints. Ensure joints are honored through TRUE-SCREED® CLU and primer. Cuts in TRUE-SCREED® CLU shall be at least 1/4" (6mm) wide.
- H. All dormant cracks greater than 1/8" shall be repaired to minimize telegraphing through the underlayment.

#### 3.2 Priming

- A. Leak Prevention: All cracks and voids shall be filled with a quick-setting patching or taping compound or equal where leakage may occur.
- B. Always prime the prepared subfloor surface with Hacker approved primer prior to installation of TRUE-SCREED® CLU.

#### 3.3 Mixing Instructions - TRUE-SCREED® CLU shall be installed using Hacker Industries, Inc. approved mixing and pumping equipment with a minimum of 110 feet (33m) of hose.

- A. Mixer and pump shall be clean per manufacturer's specifications and in good working condition.

- B. Mesh screen shall be used at the end of the hose to catch any foreign material.
- C. Mix in no more than 2-bag batches.
- D. Mix each bag of TRUE-SCREED® CLU with 3.75 gallons (14.2L) of cool potable water.
- E. Do not overwater.
- F. Check the consistency of the product on the floor to ensure a uniform distribution of the sand aggregate at both the top surface and bottom of the pour. If settling is occurring, reduce the water amount and recheck.

### 3.4 Cement Underlayment Application

- A. Scheduling: Application of TRUE-SCREED® CLU shall not begin until the building is enclosed, including roof, windows, and doors.
- B. Application:
  - 1. Minimum thickness over wood - 3/4" (19mm) with mechanically fastened mesh reinforcement. 1/2" (13mm) minimum average thickness over concrete slabs, can be feather-edged in transition areas. Maximum recommended thickness is 2" (51mm).
  - 2. Install TRUE-SCREED® CLU at specified thickness by placing contents of bags, sand and water into approved high-speed mixing device and blend for a minimum of 2 minutes. TRUE-SCREED® CLU shall be pumped onto floor areas, spreading and screeding to a smooth surface. Place as continuously as possible.
  - 3. TRUE-SCREED® CLU is suitable for interior applications only and must be covered by a finished floor material.
- C. Protection: After installation, temporary wood planking shall be placed by the GC wherever the floor underlayment will be subject to wheeled traffic or concentrated loads. The GC shall not place concentrated loads such as pallets of material, drywall, taping compound or any heavy items, which may cause deflection in the middle of the floor or in hallways.
- D. Curing and Drying: TRUE-SCREED® CLU is designed to self-cure; do not use a damp curing method and/or sealing compounds. To achieve the optimum floor, please adhere to the following procedures:
  - 1. Protect the new floor from excessive heat and drafts during curing.
  - 2. Avoid walking on surface for at least 2-3 hours after installation; adjust for varying humidity and temperature conditions.
  - 3. To avoid potential problems during the drying process, the GC shall consult Hacker Industries, Inc.'s Drying Conditions Flyer and information contained on



Hacker Industries, Inc.'s website for additional information concerning drying of this product.

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

### 3.5 Field Quality Control

- A. Slump Test: TRUE-SCREED® CLU mix shall be tested for slump as it is being pumped using a 2" by 4" (51mm by 102mm) cylinder and plexiglas.
- B. Field Samples: Cubes shall be tested as recommended by Hacker Industries, Inc. in accordance with ASTM C109 modified. Test results shall be available to architect and/or contractor upon prior request from applicator.

Note: For recommended installation instructions over precast concrete plank, contact Hacker Industries, Inc.

**Warranty:** *Subject to express warranty stated on Hacker Industries, Inc.'s website.*



## TRUE-SCREED® CLU Project References

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TRUE-SCREED® CLU is designed to resurface and repair damaged or out-of tolerance concrete surfaces in military, industrial and commercial applications. It delivers optimum performance and durability while keeping project budgets and schedules on track. Perfect for all project types, whether large or small, TRUE-SCREED® CLU is perfect for all projects that require a flat, crack-resistant surface for finished floor coverings. Below is a small sample of projects that have utilized TRUE-SCREED® CLU.

Contractor: Robins & Morton  
Project: Wellmont Medical Center  
Location: Kingsport, Tennessee  
Description: 36,272 sq. ft. of TRUE-SCREED® CLU

Contractor: Shingobee Builders  
Project: St. Francis Convent  
Location: Little Falls, Minnesota  
Description: TRUE-SCREED® CLU

Contractor: Cavanaugh Construction Corp  
Project: Summit County Juvenile Detention Facility Renovation  
Location: Akron, Ohio  
Description: 5,000 sq. ft. of TRUE-SCREED® CLU

Contractor: Summit Construction Company  
Project: Courtyard by Marriott  
Location: Stow, Ohio  
Description: TRUE-SCREED® CLU

Contractor: Johnson Wilson Construction  
Project Name: University of Minnesota – Griggs Hall  
Location: Duluth, Minnesota  
Description: 62,000 sq. ft. TRUE-SCREED CLU

Contractor: Bockstael Construction Limited  
Project Name: Southport Student Accommodation Building  
Location: Portage la Prairie, Manitoba  
Description: 43,000 sq. ft. TRUE-SCREED CLU

Contractor: D.F. Chase  
Project Name: Opryland  
Location: Nashville, Tennessee  
Description: 10,932 sq. ft. TRUE-SCREED CLU