Level Set® 300 Self-Leveling Underlayment

1. PRODUCT NAME
TEC® Level Set® 300 Self-Leveling Underlayment (300)

2. MANUFACTURER
H.B. Fuller Construction Products Inc.
1105 South Frontenac Street
Aurora, IL 60504-6451 U.S.A.
800.552.6225 Office
800.832.9023 Technical Support
800.952.2368 Fax
tecspecialty.com

3. DESCRIPTION
Ideal for fast track applications, Level Set® 300 is a high-performance, calcium aluminate-based, fiber-reinforced, self-leveling underlayment that provides a flat, extremely smooth, and durable surface for finished flooring installation.

Key Features and Benefits
• Exceptional workability for an ultra-smooth surface
• Formulated for fast-track applications — walkable in 2-3 hours
• Up to 2" (50 mm) neat and can be featheredged to adjoining elevations
• Applied up to 5" (12 cm) with proper aggregate
• Pourable or pumpable, for interior applications
• High compressive strength - 5,500 psi (38.0 MPa)
• Accepts non-moisture sensitive tile and stone in 4 hours
• Install moisture sensitive floor covering in 16-24 hours
• Contributes to LEED® project points
• VOC 0

Packaging
50 lb. moisture-resistant bags (22.68 kg)  Product #7161233111

Coverage
Coversions shown are approximate. Actual coverages may vary according to substrate conditions and thickness of applications.

<table>
<thead>
<tr>
<th>Application Depth</th>
<th>Approximate Coverage per 50 lbs. (22.68 kg)</th>
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<tbody>
<tr>
<td>1/8” (3 mm)</td>
<td>50 sq. ft. (4.65 m²)</td>
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<tr>
<td>1/4” (6 mm)</td>
<td>25 sq. ft. (2.32 m²)</td>
</tr>
<tr>
<td>1/2” (12 mm)</td>
<td>12.5 sq. ft. (1.16 m²)</td>
</tr>
<tr>
<td>1” (25 mm)</td>
<td>6.25 sq. ft. (0.58 m²)</td>
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<tr>
<td>2” (50 mm)</td>
<td>3.125 sq. ft. (0.29 m²)</td>
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</table>

Suitable Substrates
When properly prepared, suitable substrates include:
• Concrete
• Ceramic, porcelain or quarry tile
• Pavers
• Cement or epoxy terrazzo
• Cement backerboard
• Metal
• VCT or full glued down, non-cushioned vinyl sheetgoods
• Exterior grade plywood (with reinforcement lath)
• Oriented Strand Board (OSB) (with reinforcement lath)
• Gypsum substrates—minimum tensile bond strength 72 psi (0.5 MPa)

Substrate Preparation
All materials should be stored at 50°F (10°C) to 90°F (32°C) 24 hours prior to installation. It is required that all surfaces be structurally sound and free from any contaminants that may inhibit bond, including oil, grease, dust, loose or peeling paint, sealers, floor finishes, curing compounds or contaminants. Minimum tensile bond strength of 72 psi (0.5 MPa) is required. Substrate temperature should be a minimum of 43°F (6°C) and air temperature maintained above 50°F (10°C), DO NOT cover existing building expansion or control joints. Provide control joints where specified. Create a minimum of 1/16” to 1/4” (3-6 mm) wide gap where Level Set® Premium Self Levelling Underlayment abuts walls, columns, and fixtures by installing a self-sticking foam weather stripping tape or damp sand (vacuum up sand after self-leveling underlayment has cured). Surfaces must be primed with TEC® Multipurpose Primer prior to installation of Level Set® 300. See Primer label for application instructions. Level Set® 300 can be installed over green concrete with RH of 95% or less. For moisture sensitive floor coverings refer to the finished floor manufacturer’s specifications on moisture limitations. Remediation of excessive moisture conditions must be addressed prior to the installation of Level Set® 300. To reduce moisture vapor emissions to an acceptable level, use TEC® LiquidArm® Penetrating Moisture Vapor Barrier or LiquidMax® Moisture Vapor Barrier (see product data sheets for details). For installation over adhesive (except for tacky and pressure sensitive adhesive), remove adhesive by scraping until all that remains is a thin transparent layer of adhesive residue. Maximum Level Set® 300 thickness is 2” (50 mm) neat.

Single Layer of Exterior Grade Plywood or Oriented Strand Board (OSB) with Lath: Wood sub-flooring must be securely fastened with screw type or ring shank nails and adhesive. Installations of exterior grade plywood or OSB (APA Rated Sturd-i-Floor OSB, Exposure 1 or better) require 3/16” (19 mm) single layer minimum thickness on bridged floor joists up to 24” (60 cm) on center, with a maximum deflection of 1/360 of the span. Allow a gap of 1/8” to 1/4” (3-6 mm) between sheets of plywood or OSB. Long edges of subfloor must be tongue and groove or supported by bridging between floor joists.

Use suitable TEC® surface preparation products (Feather Edge Skim Coat, VersaPatch®, Fast-Set Deep Patch) to plug all floor openings, gaps and cracks and install termination dams to prevent any seepage. Prime the floor to dry to a clear film. Next, staple VersaPatch to plug all floor openings, gaps and cracks and install termination dams to prevent any seepage. Prime the floor and allow it to dry to a clear film. Next, staple 1/4” (6 mm) galvanized diamond metal or plastic lath to the floor over lapsing 2” (5 cm) at seams. Staple every 6” (15 cm) around the perimeter and overlaps, and every 8” (20 cm) in the field of the lath. Install Level Set® 300 based upon the joint spacing shown in the table below:

<table>
<thead>
<tr>
<th>Joint Spacing (o.c.)</th>
<th>Minimum SLU thickness with lath over single layer 1/16” (19 mm) tongue and groove subfloor</th>
<th>Minimum SLU thickness with lath over single layer 1/8” (15 mm) tongue and groove subfloor</th>
</tr>
</thead>
<tbody>
<tr>
<td>16” or less (40 cm or less)</td>
<td>1/16” (9 mm)</td>
<td>1/8” (12 mm)</td>
</tr>
<tr>
<td>20” or less (50 cm or less)</td>
<td>1/16” (9 mm)</td>
<td>1/8” (12 mm)</td>
</tr>
<tr>
<td>24” or less (60 cm or less)</td>
<td>1/16” (9 mm)</td>
<td>1/8” (12 mm)</td>
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Double Layer of Exterior Grade Plywood without Lath: Exterior Grade Plywood subflooring must be a minimum thickness of 1/8” (15 mm), securely fastened with screw type or ring shank nails and adhesive. Maximum floor joist spacing is 16” (40 cm) o.c. with a maximum deflection of 1/360 of the span. Allow a gap of 1/8” to 1/4” (3-6 mm) between sheets of plywood. Long edges of subfloor must be tongue and groove or supported by bridging between floor joists. Install Exterior Grade Plywood underlayment, minimum thickness of 1/8” (15 mm) with 1/8” (3 mm) gap between sheets. Underlayment fasteners should not penetrate joists below. For 1/8” (19 mm) tongue and groove subfloor thickness over joists 16” (40 cm) o.c., install Exterior Grade Plywood underlayment, minimum thickness is 1/8” (12 mm) with 1/8” (3 mm) gap between sheets. Use suitable TEC® surface preparation products (Feather Edge Skim Coat, VersaPatch®, Fast-Set Deep Patch) to plug all floor openings, gaps and cracks and install termination dams to prevent any seepage. Prime the floor. Allow primer to dry to a clear film. Maintain minimum thickness for Level Set® 300 of 1/8” (9 mm).
4. TECHNICAL DATA

<table>
<thead>
<tr>
<th>Description</th>
<th>Typical Results</th>
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<tr>
<td>28 Day Compressive Strength</td>
<td>&gt;5500 psi (37.92 MPa)</td>
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<tr>
<td>28 Day Flexural Strength</td>
<td>&gt;1100 psi (7.58 MPa)</td>
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<tr>
<td>28 Day Shrinkage</td>
<td>&lt;0.07%</td>
</tr>
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</table>

Greater than: >  Greater than or equal to: ≥  Less than: <  Less than or equal to: ≤

Physical Properties

<table>
<thead>
<tr>
<th>Description</th>
<th>Physical State</th>
<th>Color</th>
<th>Working Time</th>
<th>Walkable</th>
<th>Flooring Installation</th>
<th>Flow (ASTM C1708)</th>
<th>Storage</th>
<th>Shelf Life</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Dry powder</td>
<td>Gray</td>
<td>25-35 minutes</td>
<td>2-3 hours</td>
<td>Tile: 3-4 hours, Moisture sensitive: 16-24 hours</td>
<td>5&quot;-6&quot; (12.7-15.2 cm)</td>
<td>Store in a cool, dry area, away from direct sunlight. Do not store open containers.</td>
<td>Maximum 1 year from date of manufacture in properly stored, unopened package.</td>
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</tbody>
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5. INSTALLATION INSTRUCTIONS

Mixing

For barrel mixing: Mix 2 bags of Level Set® 300 at a time. In a clean 20-25 gallon (76-95 L) container add 6.5 qts. (6.2 L) of clean, cool potable water for EACH 50 lb. (22.68 kg) bag. Next add the Level Set® 300, while mixing at full speed using an egg-beater mixing blade attached to a heavy-duty 1/2" (12 mm) drill (minimum 650 rpm). Do not add extra water. Mix completely for a minimum of 2 minutes until lump free, adding no additional water. Avoid overwatering, over mixing or moving the mixer up and down during mixing as this will entrap air, lower the strength and may cause cracking and/or pin holing. The formation of a white film on the surface is an indication of overwatering. To keep the job moving, it is recommended that two mixing drums be used simultaneously. This will allow one mixing container to be poured while the other is being mixed.

For applications utilizing a pumping system: Level Set® 300 can be mechanically mixed using either an in-line continuous mixer and pump or a batch mixer and pump using 6.5 qts. (6.2 L) clean potable water for EACH 50 lb. (22.68 kg) bag of powder. The minimum required hose length is 100 ft. (30.5 m) for In-Line Mixers. For horizontal applications greater than 300 ft. (91.4 m) and vertical applications greater than 40 ft. (12.2 m) contact TEC® Technical Services at 800-832-9023.

Before starting ensure the mixer and pumps are completely clean and in good working order. Refer to the manufacturer instructions for specific maintenance and cleaning. Prior to Level Set® 300 installation adjust the pump to ensure proper mixing and a uniform distribution of sand is achieved throughout the mix. Do not overwater as this will lower the strength and may cause cracking and/or pin holing. To avoid segregation and over watering during installation, the water settings may require adjusting. Check the pump consistency to ensure a uniform distribution of the aggregates during pumping. The conditions that can affect the overall performance are, but not limited to, length of hose, water temperature, water pressure, substrate, ambient air temperature and powder temperature. On the end of the hose attach a mesh-screen sock to trap any foreign or unmixed material. Always test pump using the actual maximum hose length and conditions before installation to ensure proper application and appearance is achieved. Test the mixed material periodically from the pump to ensure suitable mix and flow prior to general application.

NOTE: For applications utilizing a pump system, please contact TEC® Technical Services.
**Application**

Apply when air temperature is between 50°F (10°C) and 90°F (32°C) within 24 hours of application. Close all windows, doors and HVAC vents to minimize air flow. Divide the areas to permit continuous placement without cold joints. Pour or pump the blended Level Set® 300 onto the floor and disperse with a gauge rake followed by smoothing the material with a surface smoother. Use cleated shoes to avoid leaving marks. To prevent ridges between batches, use a smoother and work a narrower dimension. Optimum results can be obtained by providing a continuous wet flow throughout the placement. Level Set® 300 has a working time 25-35 minutes at 70°F (21°C). Temperature and humidity will affect flow, working time and set time.

**Increased thickness:** For installations 2"-5" (5 cm-12.7 cm) Level Set® 300 can be extended with 15 lb. (6.8 kg) of clean, washed 3/8" (9 mm) pea gravel per 50 lb. (22.68 kg) bag. If the aggregate is wet, less water will be required to prevent over watering the Level Set® 300. Mix first with water then add 15 lb. (6.8 kg) of aggregate, per 50 lb. (22.68 kg) bag of Level Set® 300 mixing until the aggregate is coated, then place. The addition of aggregate will decrease the workability and may require a finish coat to obtain a smooth surface finish. Allow the extended layer to dry, normally 16-24 hours.

If applying an additional layer, prime the surface with TEC® Multipurpose Primer mixed 1:1 with potable water per priming instructions outlined in the TEC® Multipurpose Primer product data sheet. Level Set® 300 can be applied after the primer has dried. Outgassing can occur when applying multiple lifts. If capping is required contact TEC® Technical Services.

NOTE: When vinyl, wood or other types of floor coverings are to be installed over Level Set® 300, the requirements of the floor covering manufacturer are to be followed with respect to, but not limited to, levels of moisture.

**Curing**

Protect from excessive drying due to temperature, air movement and direct sunlight. Turn off all HVAC systems whenever possible for up to 24 hours after installation. The use of damp curing or the use of curing compounds is not recommended.

NOTE: Level Set® 300 is not a wearing surface and should be protected from construction trade traffic until the final floor covering is applied.

**Clean-up**

While material is still fresh, clean tools, hands and equipment with warm soapy water.

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**6. AVAILABILITY**

TEC® Premium Tile and Stone Installation Products are available nationwide. To locate TEC® products in your area, please contact:

Phone: 800-832-9002
Website: tecspecialty.com

**7. LIMITED WARRANTY**

The product(s) covered by this Product Data Sheet are sold subject to a Limited Warranty and related terms. H.B. Fuller Construction Products disclaims the implied warranties of merchantability and fitness for a particular purpose and all incidental and consequential damages arising out of the sale, purchase or use of this product. For Limited Warranty details visit tecspecialty.com. To obtain a hard copy of the Limited Warranty call H.B. Fuller Construction Products at 800-832-9023 or mail a written request to the address in Section 2 of this Product Data Sheet.

**8. MAINTENANCE**

Not applicable

**9. TECHNICAL SERVICES**

Technical and safety literature

To acquire technical and safety literature, please visit our website at tecspecialty.com.

**10. FILING SYSTEM**

Divisions 3 and 9