TREMCO

TECHNICAL DATA SHEET

Vulkem® Pro Series Self-Leveling Floor Underlayment

Self-leveling floor Underlayment

PRODUCT DESCRIPTION

Vulkem® Pro Series Self-Leveling Floor Underlayment is a free-flowing, cement-based, self-leveling compound designed for preparing and leveling concrete, solid hardwood, exterior exposure plywood, and OSB equivalent subfloors prior to installing floor coverings such as tile, hardwood, laminate, carpet, marble, and resilient flooring. High compressive and flexural strength, superior crack resistance, and excellent bond strength provide a long-term, strong, durable surface for floors. High early compressive strength makes Vulkem® Pro Series Self-Leveling Floor Underlayment ideal for quick turnaround projects.

BASIC USES

Vulkem® Pro Series Self-Leveling Floor Underlayment is designed for interior applications and provides exceptional leveling and preparation to achieve smooth, flat floors.

- Repairs, levels, and smooths subfloors including concrete, solid hardwood, exterior exposure plywood, and OSB equivalent surfaces.
- Prepares surfaces prior to installing floor coverings including hardwood flooring, laminate flooring, carpet, marble, resilient flooring (such as luxury vinyl tiles (LVT), luxury vinyl planks (LVP), sheet vinyl, vinyl composition tiles (VCT), linoleum), and tiles (including ceramic, porcelain, natural stone).
- Can be used over radiant heat systems.
- Ideal for quick-turnaround projects. Rapid setting and high early compressive strength allow for light traffic in as little as 4 hours (temperature dependent) and subsequent placement of floor coverings in as little as 24 hours (temperature dependent).
- Applications from feather-edge to 2” thick.

FEATURES & BENEFITS

- Fluid consistency for easy application.
- Self-Leveling for smooth, flat floors.
- High compressive and flexural strength provide strong, durable performance.
- Minimal shrinkage and superior crack resistance ensure a stable and even surface over time.
- Outstanding self-healing properties.
- Excellent bond strength.
- Polymer modified and microfiber reinforced.
- No primer needed on concrete surfaces.
- Pourable and pumpable through standard equipment.

APPLICATION INSTRUCTIONS

Concrete Surface Preparation:

Concrete surfaces must be clean, structurally sound, free from loose and deteriorated material, and free from all foreign material and contaminants such as dust, dirt, efflorescence, oil, paint, sealers, waxes, and other coatings. Surface must be a rough texture (broom finished concrete, exposed aggregate concrete, mechanically ground concrete, etc.). DO NOT use on smooth, troweled concrete without first roughing the concrete by mechanical means (grinding). To achieve the necessary surface profile, mechanically abrade the surface to a CSP 3-5 level in accordance with ICRI Guideline 310.2. After profiling, thoroughly sweep and vacuum the area to remove any debris, ensuring that the surface is properly prepared for the application of the underlayment.

Ensure that the substrate deflection under all floors meets or exceeds industry standards for the indented finished flooring. Ensure that the substrate has been designated and constructed in compliance with local codes and industry standards and confirm its structural integrity.

Use a quality concrete repair mortar to first fill in all divots, pop-outs, and other low areas so the surface is at a uniform flatness. Allow low areas to cure for 1 hour before applying Vulkem® Pro Series Self-Leveling Floor Underlayment over the entire area.

Priming properly prepared concrete surface is not necessary in most cases. Extremely porous or absorptive concrete may require priming with a quality liquid latex bonding agent/primer prior to applying the self-leveling floor underlayment. Follow the manufacturer's instructions on the chosen primer's technical data sheet.

Wood and OSB Surface Preparation:

The wood subfloor must either be solid hardwood, exterior exposure plywood, or a load bearing OSB equivalent. Ensure the wood subfloor is securely fixed to provide a rigid, stable base that is free of excessive flexing. Any boards exhibiting movement must be re-secured using screws to create a sound, solid subfloor. In accordance with ASTM F2873, deflection requirements must meet L/360 for ceramic tile and L/480 for natural stone. the wood surface must be clean, structurally sound, free from all loose material, free from all foreign material and contaminants, including dirt, dust, oil, pain, sealers, waxes, and other coatings. If necessary, sand down to bare wood and vacuum thoroughly to remove all dust. Avoid using solvents, strippers, or cleaners that could compromise the bond of a primer or the underlayment.

Ensure that the substrate deflection under all floors meets or exceeds industry standards for the intended finished flooring. Ensure that the substrate has been designed and constructed in compliance with local codes and industry standards and confirm its structural integrity.

Wood and OSB surfaces must be primed prior to applying self-leveling floor underlayment to ensure proper bonding. Once the surface is properly prepared, prime the wood or OSB subfloor with a quality liquid latex bonding agent/primer following the manufacturer's instructions or the chosen primer's technical data sheet.

After priming the surface, mechanically fasten 3-4 galvanized diamond metal lath into the wooden subfloor. Fasteners (screws) should be placed approximately every 6 inches (15 cm) on center. Proceed with mixing and placement of the Vulkem Pro Series Self-Leveling Floor Underlayment following the instructions on this technical data sheet.

Planning and Measuring:

Plan, measure, and mark out desired finished thickness/elevation. For small rooms, (bathroom, closet, mud room, etc.), the thickness can be marked on the walls around the perimeter of the room. For larger rooms, in addition to marking the thickness/elevation on the walls, concrete screws may be installed evenly spaced around the floor, to a height that is just below the planned thickness/elevation. Be sure to remove or fully drive in concrete screws after placing material, but white it is still wet.

Mixing:

All materials should be within a temperature range of 60 to 90 °F (16 to 32 ℃) before mixing. For smaller applications, mix single bags of Vulkem Pro Series Self-Leveling Floor Underlayment in a pail using a drill equipped with a "jiffy" mixer at low speeds to prevent air from being entrapped in the mixture. For larger projects, standard grouting or self-leveling equipment is recommended.

Add 1.5 gal (6 quarts) of clean, potable water to 5 gal mixing pail, then gradually pour in one 50 lb bag of Vulkem Pro Series Self-Leveling Floor Underlayment which mixing with a drill & paddle. Mix for a minimum of 3 minutes until a smooth, lump-free consistency is achieved. An additional 16 fl. oz. (1 quart) of water may be added throughout the mixing process. Be cautious not to exceed 6.5 quarts (6.2 liters) of water per 50 lb bag to prevent issues such as bleeding or segregation.

Application:

Vulkem Pro Series Self-Leveling Floor Underlayment can be applied from featheredge up to 2" thick.

Placement:

To achieve a smooth and uniform surface, the product should be placed continuously. Start by placing a continuous stream of material along one edge of the area, beginning in one corner and back-lap as needed to maintain an even finish. Continue placing material, ensuring that the material matches the planned thickness/elevation marks. Material will seek its own level. Gently spread using a smoother, gauge rake, spiked roller, notched squeegee, or trowel to assist in the placement and achieve

the desired surface quality. If the product is being placed over radiant heat systems, ensure that these systems are turned off and cooled before installation. Allow the underlayment t fully cure before turning the radiant head systems back on.

Finishing & Curing:

Vulkem Pro Series Self-Leveling Floor Underlayment is self-leveling and requires no additional finishing or troweling operations as it seeks its own level during application. Vulkem Pro Series Self-Leveling Floor Underlayment does not require curing with standard methods for most applications. However, under hot, windy, or rapid drying conditions, the use of an evaporation retardant is recommended during placement to minimize rapid evaporation and plastic shrinkage.

Clean Up:

Clean tools and equipment with a brush and warm water before material hardens. Cured material will require mechanical measures to remove.

Hydronic Heating Systems Instructions:

Always properly prepare, (and prime if needed), the substrate as instructed on this technical data sheet before installing heating system components. Heating system must be off for two continuous days before installation of the underlayment and kept off for 10 to 14 days after installation.

Follow all installation instructions of the hydronic heating manufacturer regarding fastener method of tubes, proper protection during installation of the underlayment and the minimum depth of underlayment over tubing. If the minimum depth of underlayment over tubing is not specified by the hydronic heating manufacturer, the minimum jcoverage depth should be ¾ inch (1.9 cm). Since hydronic tubes typically have an outside diamety of ¾ inch (1.9 cm), the total depth of self-leveling underlayment should be at least 1 ½ inches (3.8 cm), as measured from the subfloor to the top of the surface of the underlayment. Tubes should be fully pressurized with heat during the installation of the underlayment. A 3/8 inch (0.95 cm) wide, preformed joint filler should wrap the entire wall perimeter, columns and door frames. Honor all joints prior to installing self-leveling underlayment.

Metal lath would be fastened with fender washers over the top of the hydronic tubing into the structural subfloor. If high density board is layered over concrete, pre-drill holes in the concrete so that sufficient lengths of concrete screw(s) are embedded to mechanically fix the lath to the concrete floor.

Allow underlayment to cure 10 to 14 days before turning on the heat and then gradually increase the head by 5 degrees per day until the normal operating temperature is reached.

For typical illustration details, refer to the most current Tile Council of North America (TCNA) CAD documents #RH111 (On-Ground) and #RH111A (Above-Ground), "Poured Gypsum Underlayment Encapsulating Hydronic Tubing / Bonded Membrane / Ceramic Tile.

LIMITATIONS & CONSIDERATIONS

- Store in a dry place in original, unopened packaging.
- Do not use if ambient temperatures will fall below 40 °F (4 °C) within 72 hours after placement.
- Do not add admixtures or calcium chloride.
- Strictly follow the recommended water-to-product ratio when mixing product.
- This product is not a vapor barrier and will allow free passage of moisture.
- Consult and follow floor covering manufacturer’s directions for specific requirements regarding maximum allowable substrate moisture content, flooring adhesive selection, and compatibility prior to installation.
- Always review the Safety Data Sheet (SDS) before use.

STORAGE

Prior to use, store Vulkem® Pro Series Self-Leveling Floor Underlayment in its original, undamaged packaging in a clean, dry, and protected location with temperatures maintained between 50 to 90 °F (10 to 32 °C). Once the packaging is opened, the material should be used promptly to prevent exposure to moisture and contaminants. To preserve the quality of the underlayment, ensure the packaging is tightly sealed if any material remains after opening.

TYPICAL PHYSICAL PROPERTIES		
PROPERTY	**TEST METHOD**	**TYPICAL RESULTS**
Compressive Strength	ASTM C109 M	> 2,500 psi at 24 hours; > 5,500 psi at 28 days
Flexural Strength	ASTM C348	> 600 psi at 28 days
Working Time		Approximately 15 minutes
Initial Set Time	ASTM C191	Approximately 45 minutes
Final Set Time	ASTM C191	Approximately 1 hour
Shrinkage	ASTM C157	-0.040% at 24 hours
Flow Time		Approximately 15 minutes
Light Traffic Ready		In as little as 4 hours (temperature dependent)
Subsequent Placement of Floor Coverings		In as little as 24 hours (temperature dependent)
Application Thickness		Featheredge to 2 inches
Coverage		24 sq. ft. based on ¼" thick application.9 12 sq. ft. based on ½" thick application 6 sq. ft. based on 1" thick application
Application Temperature Range		Above 50 °F

Please refer to our website at www.tremcosealants.com for the most up-to-date Product Data Sheets.

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