

TechLevel-HPT High Performance Topping

1 Product Name

TechLevel-HPT High Performance Topping

2 Manufacturer

Custom Building Products
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3 Product Description

TechLevel-HPT is a High Performance, Self-Leveling Topping designed for fast-track resurfacing and smoothing of interior substrates such as concrete, porous tile and certain non-porous surfaces when properly prepared. TechLevel-HPT can be sealed to create a concrete wear surface for commercial, light industrial and residential applications. **TechLevel-HPT can be installed from 1/4" to 1" in one application.** TechLevel-HPT is pourable and seeks its own level to produce a smooth, flat, durable surface that hardens quickly and dries fast.

Key Features

- Versatile product, performs as high performance SLU or interior wear surface topping
- Compressive strength > 6,000 psi
- Cures fast; walkable in as little as 2 hours and accepts coatings in 24 hours
- Crack resistant, exceptionally smooth surface

Suitable Substrates

- Properly prepared concrete
- Existing ceramic/porcelain tile
- Cementitious and epoxy terazzo

Composition of Product

TechLevel-HPT is a proprietary dry blend of copolymers, cements, and inorganic chemicals.

Limitations to the Product

For interior use only. Do not use when the temperature is below 50° F (10° C), or above 90° F (32° C) and maintain working temperature 72 hours prior to product installation. Substrate must be suitable for project usage. Do not use on sloped surfaces that require drainage. Precautions should be taken when applying over post-tensioned concrete, pre-stressed concrete or prefabricated concrete planks. Contact CUSTOM technical services for further details.

TechLevel-HPT is a cement-based product and may require a suitable sealer, coating or paint for protection depending on service usage. The application of wax or polish in addition to a sealer may help to preserve the surface. Such materials will need to be reapplied on a regular basis. Sharp, rough and hard steel objects can damage cement based toppings such as TechLevel-HPT. Use protection boards for hard wheeled traffic and heavy equipment.

4 Technical Data

Applicable Standards

ASTM International (ASTM)

- ASTM C1708 Standard Test Methods for Self-leveling Mortars Containing Hydraulic Cements
- ASTM F1869 Standard Test Method for Measuring Moisture Vapor
- ASTM F710 Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring Resilient Flooring
- ASTM F2170 Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes
- American Concrete Institute (ACI)
- See hot weather and cold weather guidelines when applicable

Technical Chart

Property	Test Method	Typical Results
Pot Life/Initial Flow	ASTM C1708	20 Minutes
Heal Time	ASTM C1708	10-15 minutes
Flexural Strength	ASTM C1708	>1000psi (>6.89 MPa)
Compressive Strength at 28 Days	ASTM C1708	>6,000 psi
Walkable Hardness		2 - 3 Hours
Typical curing time for application of most sealers or coating		16-24 hours

5 Instructions

Mixing Ratios

Mix the entire 50 lb (22.68 kg) bag of powder with 5.0-5.25 quarts (4.7-5.0 liters) of clean, cool water.

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Mixing Procedures

Mix 50 lb. (22.68 kg) bag of powder with the appropriate amount of clean, cool water. DO NOT OVERWATER. Slowly add powder to water while mixing with a heavy-duty 1/2" (13 mm) electric drill and an "eggbeater" mixing paddle at minimum 650 RPM. Thoroughly mix for 2 minutes to a lump free consistency. Do not overmix. Overmixing or moving the mixer aggressively up and down during the mixing process could entrain air, which could shorten the pot life or cause pin holing during application and curing. Mix thoroughly when mixing 2 bag mixes. When placing using a pump, best results will be achieved using a batch mixer.

Application of Product

Pour the mixed TechLevel-HPT and spread with a long-handled gauge rake to the desired thickness. Directly after the topping has been dispersed, use a smoothing blade to break the material's surface rheology and blend any inconsistencies to create a more uniform or homogeneous appearance. Keep a "wet edge" when pouring multiple mixes in the same area.

*** Always install a test area to confirm proper bonding as well as a desired appearance.

IMPORTANT NOTES: Self leveling cement based products may exhibit slight cracking due to structure and substrate moment; shrinkage; and creep. Sharp or reentrant wall corners can contribute to crack formation. These cracks are considered normal. Other causes of cracking are due to high ambient or substrate temperatures; wind or air flow; water ratios and mixing technique. When surface is sealed with clear or semi-transparent coatings, these cracks may become more visible.

Raw materials are naturally colored and therefore variations in colors should be expected. Mix batches from various pallets to achieve a more consistent color. Final finish color consistency can also be affected by water, wind, mixing, air flow etc., when being left as a wear surface.

Substrate Preparation

All surfaces must be structurally sound, clean, dry and free from contaminants that would prevent a sufficient bond. Concrete must be fully cured. Refer to coating or sealer manufacturer's requirements for maximum moisture vapor transmission limitations. Approved substrates must be mechanically profiled and prepared by shot blasting, scarifying, diamond-grinding or other engineered approved methods to achieve a CSP #3 (reference ICRI CSP 3 standards for acceptable profile height). Surfaces shall be free of all grease, oil, dirt, dust, curing compounds, waxes, sealers, adhesive residues or any other foreign materials. Concrete must be free of efflorescence and not subject to hydrostatic pressure. Concrete surfaces must have a **tensile adhesion strength in excess of 200 psi (1.4 n/mm²)**. Substrate Expansion joints and construction joints, as described in ANSI A108.01, should be carried from the substrate up through the topping and filled with an appropriate elastomeric sealant. Failure to do so may cause hairline cracking and possible disbonding in the topping surface.

Substrates must be cured sufficiently when coatings are to be applied to the topping surface. For concrete with high moisture vapor emissions, apply TechMVC Moisture Vapor and Alkalinity Barrier prior to placing topping.

For additional questions about proper substrate preparation, call Custom Technical Services. Important Note: Always perform a mockup to confirm acceptance of final appearance.

Priming

For use as a wear surface, use a single coat of Tech MVC with a sand broadcast or other CUSTOM approved priming resin as the priming system for TechLevel- HPT. Immediately following the beginning MVC installation of 8 (wet) mils, broadcast #30 sand to full rejection. After MVC has cured, thoroughly vacuum excess sand from cured surface. Refer to the Tech MVC individual product data sheet for mixing and application instructions.

Curing of Product

TechLevel-HPT is typically ready for water-based applied coatings after 4-6hrs. For epoxy and other moisture intolerant coatings at least 24hrs in moderate climatic conditions is typically required. See manufacturer's recommendations and confirm during mock up.

Cleaning of equipment

Clean with water before material dries.

Health Precautions

See Safety Data Sheet for complete safety information. This product contains Portland cement. Avoid eye contact or prolonged contact with skin. Wash thoroughly after handling. If eye contact occurs, flush with water for 15 minutes and consult a physician. Use with adequate ventilation; do not breathe dust and wear a NIOSH approved respirator. If ingested, do not induce vomiting; call a physician immediately. Conformance to Building Codes Installation must comply with the requirements of all applicable local, state and federal code jurisdictions.

6 Availability & Cost

LOCATION	ITEM CODE	SIZE	PACKAGE
USA/Canada	TLHPT50T	50 lb (22.68 kg)	Bag

7 Product Warranty

Obtain the applicable LIMITED PRODUCT WARRANTY at www.customtechflooring.com/reference-library/warranties/ or send a written request to Custom Building Products, Inc., Five Concourse Parkway, Atlanta, GA 30328, USA. Manufactured under the authority of Custom Building Products, Inc. © 2017 Quikrete International, Inc

8 Product Maintenance

Properly installed product requires no special maintenance.

9 Technical Services Information

For technical assistance, contact CUSTOM Technical Services at 800-272- 8786 or contact us online.

10 Filing System

Additional product information is available from the manufacturer upon request.

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Related Products

Coverage

SQUARE FOOT COVERAGE PER 50 LB BAG = 22.8-24 sq. ft at 1/4"