



# Single-Flex® FS

**FAST SETTING PREMIUM MULTI-PURPOSE  
POLYMER-MODIFIED THIN SET MORTAR**

## KEY FEATURES

- Rapid setting, use to set and grout tile in the same day
- Excellent for commercial installations with limited downtimes
- For all tile absorption rates (from porcelain to saltillo)

## DESCRIPTION

Bostik Single-Flex®FS Fast Setting Premium Multi-Purpose Polymer-Modified Thin Set Mortar is for interior or exterior installations to set all types of ceramic, porcelain, granite, slate, marble, limestone, and dimensional stone tiles. Use over properly prepared concrete; structurally-sound, exterior grade plywood (interior/dry use only); cementitious backer board; Bostik Ultra-Set® Advanced, Bostik Black-Top™, Bostik GoldPlus™ and existing, well-bonded vinyl composition tile (VCT) or ceramic tile. For improved performance and submerged applications, mix Single-Flex® FS with Bostik 425™ Multi-Purpose Acrylic Latex Admixture.

## WHERE TO USE

Interior/exterior floors, walls and countertops.

## DIRECTIONS FOR USE

Read and understand technical and safety data sheets completely before beginning installation. Follow applicable ANSI, NTCA and TCNA installation standards. Refer to [www.bostik-us.com](http://www.bostik-us.com) for the most recent product information and safety data sheet prior to installation.

## SURFACE PREPARATION

All surfaces must be structurally sound, clean, free of dust, dirt, oil, grease, water, curing compounds, sealers, waxes or any contaminants that may inhibit proper bond. TCNA recommends roughening or scarifying glazed tile substrates.

**Note:** It is the user's responsibility to determine the condition and suitability of all surfaces before application.

## MIXING

Using a slow speed mixer (<150 rpm), mix 5-6 quarts of clean, potable water or Bostik 425™ Multi-Purpose Acrylic Latex Admixture to 50 lbs. of Bostik Single-Flex® FS. Mix to creamy consistency. Do not re-temper by adding more liquid. **No slake required.**

## APPLICATION

Apply a thin coat of Bostik Single-Flex® FS with flat edge of trowel to achieve a good mechanical bond to substrate. Comb additional mortar with the appropriate size notched trowel. If any evidence of



skinning or setting occurs, remove and re-apply fresh mortar. Apply mortar to an area no greater than can be tiled in 10 to 15 minutes. Apply tile using a twisting motion into a fresh bed of mortar to ensure maximum contact and bond. Periodically check back of tile to ensure proper transfer (interior applications—min. 80% coverage; exterior, wet, or plywood applications—min. 95% coverage).

Temperatures must be between 50°F (10°C)-100°F (37.8°C) during installation.

**Note:** If the appropriate coverage is not achieved, a larger trowel notch may be required. Back-butter each tile with mortar.

## TYPICAL PHYSICAL PROPERTIES

Open Time at 70°F (21.1°C)	10-15 minutes
Adjustment Time at 70°F (21.1°C)	10 minutes
Pot Life at 70°F (21.1°C)	45 minutes
Initial Set at 70°F (21.1°C)	60 minutes
Final Set at 70°F (21.1°C)	1.5 hours

Exceeds ANSI A118.4 and A118.11 requirements

### 28 Day Shear Strengths with Admixture:





Porcelain Tile	575 psi (ANSI REQ 200)
Glazed Wall Tile	560 psi (ANSI REQ 300)
Quarry Tile	450 psi
Quarry to Wood*	260 psi (ANSI REQ 100)
28 Day Compressive Strength	3166 psi

### 28 Day Shear Strengths with Water:

Porcelain Tile	490 psi (ANSI REQ 200)
Glazed Wall Tile	500 psi (ANSI REQ 300)
Quarry Tile	400 psi
Quarry to Wood*	250 psi (ANSI REQ 100)
28 Day Compressive Strength	3100 psi

\* Wood failure (wood typically fails between 250 to 300 psi)  
All numbers represent minimum test results.

## RECOMMENDED TROWELS FOR MAXIMUM PERFORMANCE

Coverage 85-100 ft <sup>2</sup>	Coverage 70-80 ft <sup>2</sup>	Coverage 50-60 ft <sup>2</sup>	Coverage 30-35 ft <sup>2</sup>
			
<b>3/16" X 5/32"</b> V-Notch	<b>1/4" X 1/4"</b> Square-Notch	<b>1/4" X 3/8"</b> Square-Notch	<b>1/2" X 1/2"</b> Square-Notch

Trowel size is suggested to maximize mortar transfer/coverage. Periodically check coverage during installation. Uneven substrate may require the use of either a leveling/patching material, or larger notched trowel for proper mortar coverage.

A finished mortar bed thickness of 3/32" to 1/8" is required.

**Application Over Plywood:** Maximum joist spacing shall be 16" on center. Plywood shall be Underlayment Exterior Grade or C-C Plugged Exterior Grade plywood (or better). If the existing floor is less than 1" thick, glue and nail 15/32" or 1/2" APA Underlayment Exterior Grade or C-C Plugged Exterior Grade plywood to the floor. Glue and nail using 5D or 6D (1 1/2" or 2") cement coated screw shank nails 6" on center along the panel edges and a maximum of 8" on center each way throughout the panel. Allow 1/8" gap between underlayment sheet edges and all areas that abut walls, drains, posts, etc., these areas shall be filled with mortar when tiles are installed. Clean and rough sand the plywood. Due to the limitations of plywood as a substrate, Bostik Single-Flex® FS is not intended for use on plywood in exterior, wet interior, or applications subject to heavy/commercial traffic.

**Application over Existing Vinyl/VCT Flooring:** Vinyl must be clean and well-bonded to substrate. Do not install over cushion-backed or perimeter bonded sheet vinyl. Remove any loose pieces of vinyl or flooring. Ensure the exposed substrate is suitable for application. Some flooring and cutback adhesive may contain asbestos. Follow all Federal, state and local guidelines for proper removal. Refer to the Resilient Floor Covering Institute's "Recommended Work Practices for the Removal of Resilient Floor Coverings."

**Application over Existing Ceramic Tile:** Tile must be clean and well-bonded to substrate. Mechanically abrade with a Carborundum disk, followed by a clear water wash. Installation must be thoroughly rinsed and dry before setting the new tile.

### CLEAN-UP

Clean all tools and equipment with soap and water. Do not allow material to dry on surface of tile.

### CURING

Keep all foot traffic off the installation until tile is firmly set (approximately 2-4 hours). Set times vary based on temperature, humidity, porosity of substrate and tile size.

### GROUTING

Depending on ambient air, slab, and material temperatures, grouting can generally begin after 4-6 hours with most Bostik grouting systems. Allow 24 hours before grouting with any Bostik EzPoxy™ or any 100% solids epoxy grout. Allow 24 hours before grouting with Bostik pre-mixed grouts.

### LIMITATIONS

- Do not use for installing moisture sensitive stones (i.e. green marble) or resin backed stone.
- Do not apply over oriented strand board, particle board, masonite, luan, or similar unstable substrates.
- Do not use where hydrostatic pressure can occur.
- Cutback adhesive residue should be completely removed by shot blasting in Heavy or Extra Heavy service requirements as defined by TCNA guidelines for service requirements.
- Due to the limitations of plywood as a substrate, Bostik Single-Flex® FS is not intended for use on plywood in exterior or wet interior applications, or in areas subject to heavy commercial traffic.

### PACKAGING

50 lb. bag, white and gray formulations.

### DANGER

CORROSIVE WHEN WET. MAY CAUSE BURNS. IRRITATING TO SKIN, EYES AND RESPIRATORY TRACT. MAY CAUSE CANCER. Do not breathe dust. Do not get in eyes, on skin or on clothing. Do not swallow. Handle with care. Use only in a well-ventilated area or wear a mask. Wear protective clothing including gloves during handling. Wash thoroughly after handling. Store bag in a cool, dry area. Do not reuse bag.

### FIRST AID TREATMENT

Contains Portland Cement, Gypsum and Quartz Silica. If in eyes or on skin, rinse with water for at least 15 minutes. If on clothes, remove clothing. If breathed in, move person to fresh air. If swallowed, call a Poison Control Center or doctor immediately. Do not induce vomiting.

### STORAGE/SHELF LIFE

Store in a clean, dry area, off the ground on a pallet, not affected by freezing or hot temperatures. Shelf life is one year from date of manufacturing in unopened bags.

### VOC

0 g/L (as calculated per SCAQMD 1168).

### LIMITED WARRANTY

Limited Warranty found at [www.bostik-us.com](http://www.bostik-us.com) or call 800.726.7845. TO THE MAXIMUM EXTENT ALLOWED BY LAW, BOSTIK DISCLAIMS ALL OTHER EXPRESS OR IMPLIED WARRANTIES, INCLUDING WITHOUT LIMITATION WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. UNLESS OTHERWISE STATED IN THE LIMITED WARRANTY, THE SOLE REMEDY FOR BREACH OF WARRANTY IS REPLACEMENT OF THE PRODUCT OR REFUND OF THE BUYER'S PURCHASE PRICE. BOSTIK DISCLAIMS ANY LIABILITY FOR DIRECT, INCIDENTAL, CONSEQUENTIAL, OR SPECIAL DAMAGES TO THE MAXIMUM EXTENT ALLOWED BY LAW. DISCLAIMERS OF IMPLIED WARRANTIES MAY NOT BE APPLICABLE TO CERTAIN CLASSES OF BUYERS AND SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATIONS MAY NOT APPLY TO YOU. It is the buyer's obligation to test the suitability of the product for an intended use prior to using it. The Limited Warranty extends only to the original purchaser and is not transferable or assignable. Any claim for a defective product must be filed within 30 days of discovery of a problem, and must be submitted with written proof of purchase.

### BOSTIK HOTLINE™

**Smart help™**  
**1-800-726-7845**

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This document supersedes all previously published literature.

