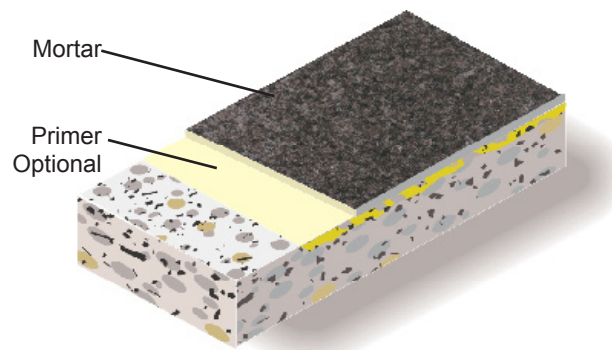




# FasTop™ 12M Urethane Mortar System

**General Polymers FasTop 12M URETHANE MORTAR SYSTEM** is a troweled applied mortar installed at 1/4" - 3/8" thickness. Under normal conditions, FasTop 12M is hand troweled onto the substrate without the use of a primer or topcoat. FasTop 12M is designed for conditions requiring rapid installation and protection of the concrete, wood or steel substrate from thermal shock, impact, corrosion, mild chemical attack and abrasion. FasTop 12M is textured and provides some skid inhibition under most wet process conditions, and will remain so throughout the life of the floor. FasTop 12M can be used on new concrete, or to restore rough or badly damaged floor surfaces that have been exposed to years of contamination. FasTop 12M is extremely durable, and in most cases, has physical characteristics which are approximately double that of concrete.



## Advantages

- Can be applied to "green" concrete
- Minimal downtime, quick turnaround
- Bonds to slightly damp substrate
- Thermal shock resistant
- No moisture vapor emission testing required
- Unaffected by freeze/thaw cycles
- Wide service temperature range (-50°F to 300°F)
- Optional primer and topcoat
- Impact resistant
- Interior or exterior use
- Accepted for use in USDA inspected facilities
- Chemical resistant to:

**28 Day Exposure @ 72°F**

	<b>Result</b>
Alcohol	NE
Ethylene Glycol	NE
Fats, Oils & Sugars	NE
Gasoline, Diesel & Kerosine	NE
Hydrochloric Acid (<35%)	Stain
Lactic Acid (Milk)	NE
Mineral Oils	NE
Most Organic Solvents	NE
Muriatic Acid	NE
Nitric Acid (<10%)	NE
Nitric Acid (<30%)	Stain
PM Acetate	NE
Phosphoric Acid (<50%)	NE
Potassium Hydroxide (<50%)	NE
Sodium Hydroxide (<50%)	NE
Sulfuric Acid (<50%)	NE
Water	NE
Xylene	NE

## Uses

- Cagewash areas, chemical processing plants
- Commercial kitchens, dairy plants
- Meat and poultry plants, pulp and paper plants
- Restrooms and concession stands
- Sugar processing plants, walk-in coolers
- Walk-thru autoclaves, wastewater treatment facilities

## Typical Physical Properties

Color	Red and Light Gray
Working Life, mixed @ 77°F	15-20 minutes
Cure Time @ 77°F	
Foot Traffic	4-5 hours
Full Service	6-7 hours
Tensile Strength ASTM C 307	>500 psi
Compressive Strength ASTM C 579	>6,000 psi
Flexural Strength ASTM C 580	>1,000 psi
Coefficient of Thermal Expansion ASTM C 531	1.1 x 10 <sup>-5</sup> in/in/° F
Critical Radiant Flux ASTM E 648	>1.0
Smoke Denisty ASTM E 662	287-346
Density ASTM C 905	>130 lbs/ft <sup>3</sup>
Impact Resistance ASTM D 2794	Pass
Abrasion Resistance ASTM D 4060 CS-17 Wheel, 1,000 cycles	16 ft. pound 60-70 mgs lost
Service Temperature @ 3/8" Application	-50°F - 235°F

## Limitations

The substrate must be structurally sound, cleaned of any foreign matter that will inhibit adhesion.

Do not apply in temperatures below 40° F or above 85° F or when relative humidity is greater than 85%. Do not apply to non-reinforced sand cement screeds, asphaltic or bitumen substrate, glazed tile or nonporous brick, tile, or magnesite, copper, aluminum, soft wood, existing coatings of epoxy, polyester, or urethane composition, elastomeric membranes, fiber reinforced polyester (FRP) composites. Do not apply to wet concrete or to polymer modified patches with a moisture content greater than 10%. Do not apply to concrete if temperature is within 5° F of dew point.

Protect substrate during application from condensation from any overhead leaks. Do not apply to overhead surfaces.

**Do not featheredge.**

**Do not hand mix.**

**Do not apply to cracked or unsound substrates.**

**If patching, sloping, filling joints, etc. with any Fastop materials, allow the repair material to cure for a minimum of 8 hours before covering with FasTop12M.**

Full chemical resistance is achieved after a seven (7) day cure. Consult the Technical Service Department for specific chemical resistance.

## Installation

General Polymers materials shall only be installed by approved contractors. The following information is to be used as a guideline for the installation of the **FasTop 12M URETHANE MORTAR SYSTEM**. Contact the Technical Service Department for assistance prior to application.

### Surface Preparation

General Polymers **FasTop 12M URETHANE MORTAR SYSTEM** is normally applied to concrete, but may be successfully applied to mild steel and wood block. Surface contaminants and/or weak spots must be removed and a clean, hard surface exposed to ensure proper bonding to the substrate.

Concrete surfaces shall be abrasive blasted to remove all surface contaminants and laitance. The prepared concrete shall have a surface profile equal to CSP 4-6. Refer to Form G-1. Consult the Technical Service Department if oil or grease is present.

After initial preparation, inspect the concrete for bug holes, voids, fins and other imperfections. Protrusions shall be ground smooth while voids shall be filled with a General Polymers system filler. For recommendations, consult the Technical Service Department.

New concrete should be cured a minimum of 28 days. Use a light steel trowel finish. Moisture content of the concrete should not exceed 10%.

## Application Information — Surface Prep Profile CSP 4-6

VOC MIXED		MATERIAL	MIX RATIO	THEORETICAL COVERAGE PER COAT CONCRETE	PACKAGING
0 g/L <50 g/L 0	Cove Base	4040 4060 5055	2:1 1 unit	300 sq. ft. / gal 15-20 lin. ft. @ 6" cove 1" radius 30 lbs.	1.5 - 15 gals Sold in units only 30 lbs.
<200 g/L	Primer Optional for outgassing	4040	2:1	300-400 sq. ft. / gal	1.5 -15 gals
<50 g/L 0	Mortar	4090 5090	1 unit	19-21 sq. ft. /unit @ 1/4" 13-14 sq. ft. / unit @ 3/8" 45 lbs	1 Premeasured Unit 45 lb. bag

## Service Temperature

Throughout the application process, substrate temperature should be 40°F - 85°F. Substrate temperature must be at least 5°F above the dew point. Applications on concrete substrates should occur while temperature is falling to lessen offgassing. The material should not be applied in direct sunlight, if possible.

## Extreme Conditions

Ideal conditions for mixing and laying the FasTop 12M URETHANE MORTAR SYSTEM is between 40° F and 85° F. Do not apply when temperatures are below freezing. FasTop 12M has a very short pot life above 80° F.

## Cold Temperatures Below 50° F

Keep materials stored and mix in 60° F to 70° F conditions. Protect application area with cover or tent. Flame heat concrete immediately ahead of layers. Use hot air blowers to raise temperature under cover or tent. Maintain air temperatures for at least 4-6 hours after laying. Allow a longer time period for the FasTop 12M to reach an operating strength (24-48 hours depending upon substrate and ambient air temperatures).

## Hot Temperatures Above 80° F

Keep materials stored and mix them in an air-conditioned environment of 60° F - 70° F. Do not lay the FasTop 12M in direct sunlight. Shade with a tarpaulin or similar material. Work early and/or late, and preferably at night if daytime temperatures are extreme.

## Edge Terminations

All free edges of the FasTop 12M, whether at the perimeter, along gutters or at drains, will require extra anchorage to distribute mechanical and thermal stresses. This is best achieved by forming or cutting grooves in the concrete. Grooves should have a depth and width of two times the thickness of the FasTop 12M. If necessary, protect all free edges with mechanically attached metal strips. NEVER featheredge, always turn into an anchor groove.

## Expansion Joints

Expansion joints should be provided in the substrates at the intersection of dissimilar materials. Isolate areas subject to thermal stresses, vibrational movements or around load-bearing columns and at vessel sealing rings. All cracks should be routed out and filled with FasTop 12M prior to floor application. Large cracks may require treatment as expansion joints with an elastomeric sealant.

## Cove Base

Cove base should be installed prior to the floor. Tape out cove with duct tape or a good quality masking tape. Terrazzo strips will also work.

## Priming

Prime wall with 4040 FasTop Urethane Primer. Primer only has a 10 minute pot life. Be sure to prime entire surface and about halfway onto tape. Prime only what cove base that can be installed within 30 minutes. Begin installing cove base right away – No need to wait for primer to tack up.

Mixing: Do not mix partial units, the fine aggregate and pigment can and will separate. A drill and a paddle work the best, but a KOL mixer works well also. Mix pre-measured unit of 4060A for one minute, add 4060B pre-measured unit and mix. Slowly add 5055 aggregate and mix until thoroughly wet out. Immediately pour mixed material out of bucket, in a bead, next to the wall. Rough apply cove mortar using a trowel. Do not worry about trowel marks at this time; just get all the mixed material applied to the wall at about 1/8" thick. Material will need to be finished within approximately 20 minutes depending on temperature.

Placing a halogen light next to cove base will cast shadows and assist on finishing the cove base with minimal waves and/or trowel marks. Use a minimum of a ¾" radius cove trowel and finish cove base. Any smaller may result in a loss of the radius once the floor is tied in. Lightly misting cove trowel with water, as a trowel lube, works well - Do not use isopropyl alcohol. Carefully remove tape and finish rough edges. Install floor once cove is hard to the touch, about 2 ½ to 3 hours.

Required Tools: Drill, proper mixing paddle, 3" x 8" trowel works best to apply, margin trowel, and a radius cove trowel – Minimum of ¾" but 1" is preferred.

## Primer Optional Mixing and Application

1. Add 2 parts 4040A (resin) to 1 part 4040B (hardener) by volume. Mix with low speed drill and Jiffy blade for three minutes and until uniform. To insure proper system cure and performance, strictly follow mix ratio recommendations.

2. 4040 may be applied via spray, roller or brush. Apply at a spread rate of 300-400 sq. ft. per gallon, evenly, with no puddles. Coverage will vary depending upon porosity of the substrate and surface texture. Do not mix more material that can be applied within 10 minutes.

## Mortar Mixing and Application

1. Set up mixing station as near to work areas as possible. Exothermic heat will be generated and flash setting may occur if the material remains in mixer or a heap on the floor for longer than ten minutes. Multiple batches may be mixed in a mortar mixer. DO NOT mix more material than can be applied in 20 minutes.

2. Add 4090A (resin) to 4090B (hardener). Mix with low speed drill and Jiffy mixer for one minute and until uniform. The white (A) and brown (B) colors should blend to a uniform caramel color.

3. Slowly pour 45 lbs. of 5090 aggregate (one 45 lb. bag) to mixed material until aggregate is thoroughly 'wet-out'. Do not mix for more than 3 minutes. Immediately pour the mixed material onto substrate to 5/16" to achieve a total thickness of desired floor of 1/4". Apply at 1/2" to achieve a finished thickness of 3/8" using screed box. DO NOT allow the mix to sit in the mixer or in a pile on the floor.

4. Allow a wet edge of between 8-10 linear feet per installer. Divide up work area accordingly.

5. DO NOT use a power trowel, power float, or serrated hand trowel. Compact and smooth the mixed material using a normal steel plastering or cement finishing trowel.

6. Using considerable pressure on the trowel, spread the material from side to side, push back into previous mix (wet edge), pull forward to establish the thickness and then, with a light pressure, trowel from side to side to close up. The last few strokes should always be in one direction only, left to right or right to left. NEVER back and forth. Excess troweling will bring resin to the surface and may cause a smooth spot.

7. Allow to cure for 4-6 hours (77°F) prior to foot traffic.

## Cleanup

Clean up mixing and application equipment immediately after use. Use toluene or xylene. Observe all fire and health precautions when handling or storing solvents.

## Safety

Refer to the MSDS sheet before use. federal, state, local and particular plant safety guidelines must be followed during the handling and installation and cure of these materials.

Safe and proper disposal of excess materials shall be done in accordance with applicable federal, state, and local codes.

## Material Storage

Store materials in a temperature controlled environment (50°F/10°C – 90°F/32°C) and out of direct sunlight.

Keep resins, hardeners, and solvents separated from each other and away from sources of ignition.

## Maintenance

Occasional inspection of the installed material and spot repair can prolong system life. For specific information, contact the Technical Service Department.

## Shipping

- Destinations East of the Rocky Mountains are shipped F.O.B. Cincinnati, Ohio.
- Destinations West of the Rocky Mountains are shipped F.O.B. Victorville, California.

For specific information relating to international shipments, contact your local sales representative.

## Disclaimer

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Consult [www.generalpolymers.com](http://www.generalpolymers.com) to obtain the most recent Product Data information and Application instructions.

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