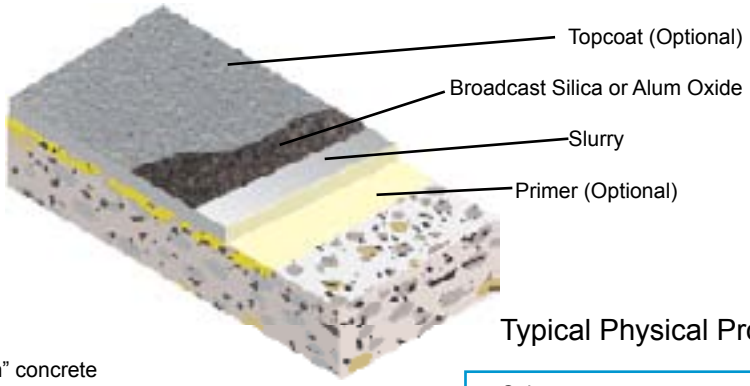
FasTop® 12S Urethane Slurry System

General Polymers FasTop 12S URETHANE SLURRY SYSTEM is a cementitious urethane cement self-leveling slurry to be applied at 3/16" thickness and broadcast to yield a 1/4" - 3/8" finished system. ***FasTop* 12S** can be applied with a pin rake, screed rake or flat trowel. It is designed to protect concrete, wood and steel substrates from thermal shock, impact, corrosion, mild chemical attack and abrasion. A decorative quartz broadcast may be specified as ***FasTop* 12S-U1** an upgrade to the standard system.



Advantages

- Can be applied to "green" concrete
- Rapid return to service
- Water based
- Hot cooking oil and steam resistance
- Low temperature cure
- Will not lose bond due to thermal shock
- Impact resistant
- Moisture insensitive
- No moisture testing required
- Acceptable for use in USDA inspected facilities
- Resistant to:

28 Day Exposure @ 72ºF	Result
	NE= No Effect
Alcohol	NE
Ethylene Glycol	NE
Fats, Oils & Sugars	NE
Gasoline, Diesel & Kerosine	NE
Hydrochloric Acid (<35%)	NE
Lactic Acid (Milk)	NE
Mineral Oils	NE
Most Organic Solvents	NE
Muriatic Acid	NE
Nitric Acid (<10%)	NE
Nitric Acid (<30%)	Slight Softening
PM Acetate	NE
Phosphoric Acid (<50%)	NE
Potassium Hydroxide (<50%)	NE
Sodium Hydroxide (<50%)	NE
Sulfuric Acid (<50%)	Slight Gloss Loss
Water	NE
Xylene	NE

Uses

- Food and Beverage Manufacturing and processing areas
- Commerical and Institutional kitchens
- Dairies

Limitations

- Protect material from freezing

Typical Physical Properties

Color		Red, Light Gray or Neutral
Cure Time	Recoat	4 hours
	Foot Traffic	4-6 hours
	Full Service	12 hours
Abrasion Resistance ASTM D 4060, CS-17 Wheel, 1,000 cycles		20-30 mgs lost
Hardness, Shore D ASTM D 2240		75
Tensile Strength ASTM C 307		550-600 psi
Compressive Strength ASTM C 579		>5,000 psi
Flexural Strength ASTM C 580		3,700 psi
Adhesion ACI 503R		300 psi concrete failure
Impact Resistance MIL-D-3134, Sec.4.7.3		Withstands 16 ft lbs without cracking, delamination or chipping
Flammability		Self-Extinguishing over concrete
Coefficient of Friction ASTM D 2047		>0.80
Critical Radiant Flux ASTM E 648		>1.0
Smoke Denisty ASTM E 662		287-346
Service Temperature at 3/16"		-50ºF - 300ºF
Shrinkage		Nil
Water Absorption		Nil

Installation

The following information is to be used as a guideline for the installation of the ***FasTop* 12S URETHANE SLURRY SYSTEM**. Contact the Technical Service Department for assistance prior to application.

Surface Preparation - General

General Polymers systems can be applied to a variety of substrates, if the substrate is properly prepared. Preparation of surfaces other than concrete will depend on the type of substrate, such as wood, concrete block, quarry tile, etc. Should there be any questions regarding a specific substrate or condition, please contact the Technical Service Department prior to starting the project. Refer to Surface Preparation (Form G-1).

Surface Preparation - Concrete

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 has occurred, 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.

Limitations

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

Do not apply in temperatures below 40ºF/4.4ºC or above 80ºF/26ºC or when relative humidity is greater than 80%. If substrate is not concrete, wood or metal as described in Surface Preparation (Form G-1) then do not apply. Call Technical Service Department for recommendation.

When installing *FasTop* 12S, if encountering concrete outgassing, please discontinue installation and apply 3477 Epoxy Water Emulsion Primer / Sealer. Allow to dry until tack free and proceed with the *FasTop* 12S installation.

- Protect material from freezing prior to installation.
- Do not featheredge.
- Do not mix partial units.
- Do not hand mix. Do not let mixed material sit in a bucket, even a 2-3 minute delay in pouring will reduce working time.
- Do not apply to cracked or unsound substrates.
- Allow Fastop 12S/SL to cure a minimum of 12 hrs prior to topcoating.
- 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 12S or 12SL.
- Do not install outside, call Technical Service Department.

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

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	3477	2:1	250 sq. ft. / gal	3 or 15 gals
<50 g/L 0	Slurry	4080 5080	1 unit	34-36 sq. ft. /unit @ 1/4” 22-24 sq. ft. / unit @ 3/8” 55 lbs	1.8 gals 55 lb. bag
0	Broadcast (standard)	5310 Dry Silica Sand 20-40 mesh	for seeding	400 lbs. / 1,000 sq. ft.	50 lbs.
<50 g/L 0	Optional Topcoat	4090TC 5095	1:1	80-120 sq. ft./gal 8 lbs	Pre-measured 8 lbs.

Cove Base

Mixing and Application

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. 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 3/4" 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 3/4" but 1" is preferred.

NOTE: 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 12S or 12SL.

Primer

Mixing and Application

1. Premix 3477A (resin) and 3477B (hardener) separately, using a low speed drill and Jiffy blade. Mix for one minute and until uniform, exercising caution not to whip air into the materials.

2. Add 2 parts 3477A (resin) to 1 part 3477B (hardener) by volume. Mix with low speed drill and Jiffy blade for three minutes and until uniform. DO NOT mix more material than can be used within 4 hours. Apply material with a short nap roller at a spread rate of 250 sq. ft. per gallon.

3. DO NOT ALLOW TO PUDDLE. Any uneven or textured surfaces will require more material than an even surface.

4. Proceed when tack free, 1-4 hours on shot blasted concrete.

Slurry

Mixing and Application

DO NOT PREMIX 4080 PART B HARDENER. OVER EXPOSURE TO AIR EFFECTS PHYSICAL PROPERTIES

1. Add 4080A (resin) to 4080B (hardener) and mix with low speed drill and Jiffy mixer until uniform.

2. Pour 55 lbs. 5080 aggregate and 1 pre-measured unit (1 gal Part A : short-filled gal Part B) into container and mix until no lumps remain. Immediately pour mixed material onto the substrate and pull out using a pin rake, screed rake or flat trowel. Place all material within 15 minutes. Back roll with a loop roller to assist leveling. Allow material to self-level (2-5 minutes).

NOTE: At substrate temperature less than 50ºF/10ºC, the application will be adversely affected.

3. Broadcast 5310 Dry Silica Sand (20-40 Mesh) to saturation (about 400# per 1000 square feet).

4. Allow to cure for a minimum of 4 hours prior to topcoating with 4090TC, sweep off excess aggregate with a clean, stiff bristled broom. Clean sand can be saved for future use. All imperfections such as high spots should be smoothed before the application of the topcoat.

NOTE: The broadcast distribution is critical to the success of the application. The floor's finished appearance depends on the manner in which the aggregate has been applied. In grass seed like fashion, allow the aggregate to fall after being thrown upward and out. **DO NOT THROW DOWNWARD AT A SHARP ANGLE USING FORCE.**

Topcoat -Optional

Mixing and Application

Allow slurry to cure for a minimum of 4 hours before applying topcoat.

DO NOT PREMIX Part A or Part B

1. Add 4090TCA (resin) to 4090TCB (hardener). Mix with low speed drill and Jiffy blade for 10-15 seconds then add 8 lbs. of 5095 aggregate blend into mixed liquids.

2. Mix aggregate at medium to high speed for three minutes to facilitate incorporation of the powder and avoid lumps. Pour mixed material on the surface and spread evenly over the FasTop surface.
NOTE: in hot humid conditions, reduce mixing time to 2 minutes.

3. Apply 4090TC using trowel, squeegee, grout float and backroll with a 1/4" - 3/8" nap roller to remove any marks and provide uniform texture, in thicker films >10 mils loop rollers may also prove effective. Spread at a rate of 80-120 square feet per gallon, evenly, with no puddles making sure of uniform coverage. **Take care not to puddle materials and insure even coverage.**

NOTE: Do not dip and roll. Do not roll out of a puddle or ribbon.

4. Allow to cure 4-6 hours minimum before opening to light foot traffic. If recoating is required, abrade surface before recoating.

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 (50ºF/10ºC – 90ºF/32ºC) 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 to obtain the most recent Product Data information and Application instructions.

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