



S-120 EPOXY EMULSION ADMIXTURE

PRODUCT DESCRIPTION:

S-120 is a two part epoxy emulsion admixture designed for use with S-700 and S-710 to provide a grout and mortar system that will resist dilute acids, alkalis, stains and chemicals that normally break down unmodified Portland cement grouts and mortars. S-120 is formulated to offer outstanding physical properties, workability, sag resistance and is water cleanable. S-120 is non-toxic and non-flammable. S-120 meets or exceeds ANSI A118.8 specifications.

USES:

S-120/S-700 is recommended for setting and grouting quarry, ceramic mosaic, decorative tile, pavers and brick on walls and floors where some dilute acids, alkalis and mild chemical resistance is required. The S-120/S-700 system can be used as an epoxy topping to remodel and improve existing Portland cement based grout installations. To remove or improve existing cement based grout installations, the existing grout must be removed a minimum of one quarter inch (1/4") below the tile surface. After dust is cleaned, apply grout per grouting procedure.

LIMITATIONS:

S-120 is not recommended for installation where it would be exposed to excessive levels of acids, alkalis or chemicals. S-400, S-500, S-600, S-5000 or S-4000 mortars and grouts or grouts should be used when chemical resistance is a prime consideration.

TECHNICAL DATA: Physical Properties

Initial Set, hrs	7.0	
Hardness after 24 hrs. (Shore D)	55 to 65	
Linear shrinkage, %	0.00	
Modules of elasticity, psi	5.1 x 10 ⁸	
Compressive strength, psi (ASTM C-579), 7 Day	3800	
Shear bond strength, psi (ANSI- A118.8, quarry tile) 7 Days	350	
Shear bond strength, psi (tile) bonded to plywood 7 Days	200	Plywood failed
Tensile strength	450 psi	

INSTALLATION:

Substrate: Substrate must be structurally sound, dry and free of sealers, coatings, oil, grease and any dirt or dust. Exterior grade plywood should be specified according to the ANSI A 108 and the Tile Council of North America [Handbook for Ceramic Tile Installation](#). Concrete and masonry must be cured before tile installation.

Mixing: The mixing ratio for the two parts of S-120 is: One Part A to one Part B to eight (8) parts S-700. Any deviations to any of the components or proportions may result in severe shrinkage cracking. Exact proportioning and thorough mixing of the parts with one another is absolutely essential for satisfactory curing and performance. Empty contents of Part A (resin portion) and Part B (hardener portion) into mixing bucket and mix thoroughly using either hand tools or a slow-spin power mixer. Add S-700 powder in small increments and continue slow speed mixing until all of S-700 is incorporated into the liquid portion. Care should be taken to avoid whipping air into the mix. Continue mixing until smooth and free of lumps. It is highly recommended that complete units be mixed; however, if necessary to split a unit, weigh out one part of A to one part of B and eight (8) parts of S-700. Clean tools with water immediately after use.

APPLICATION:

As a Mortar: Spread mixed S-120 with a notched trowel, then set. Use a 1/8" notched trowel for ceramic mosaics to achieve a 1/16" bed. Use a 1/4" notched trowel for smooth or shallow ribbed pavers. Full coverage of the setting material on the back of the tile is desirable to prevent broken and cracked tile. The National Tile Contractors Association recommendation to accomplish full coverage is as follows: Apply mortar to substrate using the flat side of the trowel to fill any voids and "key" the material to the substrate. Using the proper sized trowel, comb the mortar evenly in one direction only. Do not "swirl". Set the tile in the mortar with the edge of the tile parallel to the comb lines. To remove air voids, push the tile back and forth in the mortar perpendicular to the comb lines. Once the S-120 begins to set, it should be discarded, as proper bonding will not be accomplished. Allow 24 hours to elapse before grouting tile.

Temperature	Pot Life	Clean-Up Time	Set Time
60°F (16°C)	4 hrs.	45 min.	36-48 hrs.
75°F (24°C)	3 hrs.	30 min.	24-36 hrs.
90°F (32°C)	1 ½ hrs.	15 min.	12-24 hrs.

CAUTION: PROTECT FROM ALL TRAFFIC FOR 72 HOURS, HEAVY TRAFFIC FOR 7 DAYS.

COVERAGE:**6-lb. Single Unit****Setting:**

Trowel Size	Sq. Ft./With S-700 Natural
5/32" V-notch	65-80
1/4" x 1/4" sq. notch	35-55
3/8" x 3/8" sq. notch	25-33
1/2" x 1/2" sq. notch	15-30

As a Grout: With a firm, straight edge rubber trowel (Grout Master) force as much S-120 into joints as possible, using sufficient pressure and flow to avoid air pockets or voids. Before the S-120 loses its plasticity, remove excess with rubber trowel in a squeegee fashion working diagonally to joints to facilitate removal without pulling material from joints.

COVERAGE:**Grout Coverage: Floor Tile**

Tile Size	*S-700/S-120 Joint Width			
	1/8"	1/4"	3/8"	1/2"
1" x 1" x 1/4"	1.7	0.9	0.5	0.4
2" x 2" x 1/4"	3.4	1.7	1.1	0.9
3" x 3" x 1/4"	5.1	2.6	1.6	1.3
4" x 4" x 1/4"	6.8	3.4	2.1	1.7
4" x 4" x 3/8"	4.5	2.3	1.4	1.1
4" x 4" x 1/2"	3.4	1.7	1.1	0.9
4" x 12" x 1/2"	5.9	3.0	1.8	1.5
6" x 6" x 1/4"	10.2	5.1	3.2	2.6
6" x 6" x 3/8"	6.8	3.4	2.1	1.7
6" x 6" x 1/2"	5.1	2.6	1.6	1.3
6" x 6" x 3/4"	3.4	1.7	1.1	0.9
6" x 9" x 3/4"	4.2	2.1	1.3	1.1
6" x 12" x 5/16"	11.5	5.8	3.6	2.9
6" x 12" x 3/8"	9.6	4.8	3.0	2.4
8" x 8" x 5/16"	10.9	5.5	3.4	2.7
8" x 8" x 3/8"	9.1	4.6	2.8	2.3
8" x 8" x 1/2"	6.8	3.4	2.1	1.7
10" x 10" x 5/16"	13.6	6.8	4.3	3.4
12" x 12" x 5/16"	16.3	8.2	5.1	4.1
12" x 12" x 3/8"	13.6	6.8	4.3	3.4
12" x 12" x 1/2"	10.2	5.1	3.2	2.6
12" x 18" x 5/16"	20.0	10.0	6.3	5.0
12" x 18" x 3/8"	16.7	8.4	5.2	4.2
13" x 13" x 5/16"	17.7	8.9	5.5	4.4
16" x 16" x 3/8"	18.1	9.1	5.7	4.5

*S-700 coverage is in sq. ft. per lb. of grout powder

CLEAN-UP:

For final clean-up, use Scotchbrite® pad and a minimum amount of water. Warm water with mild soap will speed clean-up. Some tile may require buffing with a dry cloth after joints are firm. Clean completely, as S-120 is difficult to remove after it begins to set. Clean tools and spills with warm water as soon as possible after tools are used or spill occurs.

PACKAGING:

S-120 is available in 6 and 12lb boxes (6lb. is proportioned for 25lb. bag of S-700; 12lb. for 50lb bag of S-700). Also available in 79lb industrial unit.

SPECIFICATIONS:

Material: Epoxy admixture consisting of one part emulsified epoxy resin and one part hardener as manufactured by Summitville Tiles, Inc., Summitville, Ohio. S-120 admixture mixed with S-700 shall be used for setting/grouting quarry, ceramic mosaics, decorative tile, pavers or brick on horizontal or vertical surfaces. S-120/S-700 when completely set and hardened shall be resistant to attack by dilute acids, alkalis and other chemicals that normally break down Portland cement mortars and grouts. Meets or exceeds ANSI A118.8 specifications.

COLOR:

S-120 may be mixed with any S-700 color grout.