S-4500 FURA-SET EPOXY MORTAR

PRODUCT DESCRIPTION:
Fura-set is a 3 part 100% solids epoxy mortar system designed for outstanding chemical and moisture resistance. S-4500 Fura-set meets or exceeds ANSI A118.3 requirements for epoxy mortar. Fura-set will cure at low temperatures (40°F) and high humidity. Floor brick may be installed with Fura-set on sound, cured damp concrete at temperatures as low as 40°F. The Fura-set filler system is an inert aggregate that exhibits superior physical characteristics when compared with typical epoxy filler systems. The liquid binder system is unique when compared with conventional epoxy binder systems in that it will cure at low temperatures and on cured, damp substrates. Fura-set meets all USDA requirements for meat and poultry processing plants. Although Fura-set was designed primarily for floor brick installation, it will function well in other epoxy floor mortar applications.

USES:
Fura-set is recommended for setting floor brick in dairies, distilleries, chemical laboratories, breweries, food processing plants, meat and poultry processing plants and refineries.

LIMITATIONS:
Continuous temperature exposure of cured Fura-set above 230°F is not recommended. Fura-set is designed for floor and cove base applications. S-4500 is not recommended for wall applications.

TECHNICAL DATA: Physical Properties

Hardness (Shore D) 7 days	65 to 70
Hardness (Shore D) 28 days	70 to 75
Linear shrinkage, %	0.01
Compressive strength, psi (ASTM C-109) 7 days	10,000
Shear bond strength, psi (ANSI A118.3) 7 days	1100
Tensile strength	1200 psi
Initial setting time @ 72°F hrs.	1 - 1¼ hrs.
Final setting time @ 72°F hrs.	5 - 6 hrs.
Working time	45 to 60 min.
Pot life @ 72°F	60 min.

INSTALLATION:
Substrate: Fura-set is recommended for use on cured concrete, masonry surfaces, cementious backer board and plywood. Substrate shall be prepared in accordance with ANSI A108.4. Surface to receive Fura-set must be structurally sound, free from sealers, coatings, oil, dirt, dust and standing water. New masonry surfaces should be sufficiently cured, dimensionally stable and free from cracks. Brush surfaces with a stiff brush to remove all loose material that may be encountered. Consult the Tile Council of North America Handbook for Ceramic Tile Installations, ANSI A-108 and any other appropriate industry guidelines for setting requirements.

MIXING: 4:1:15
Fura-set is furnished in 3 parts, Resin Part A Hardener Part B and Powder Part C. Fura-set is furnished in one standard size. For partial unit applications, the mix ratio is: Part A- 4 parts, Part B- 1 part and Part C- 15 parts by weight. PART C ONLY may be adjusted ± two parts to develop the consistency desired by the installation mechanic. Exact proportions and thorough mixing of parts A & B with one another is absolutely essential for satisfactory curing and performance. Stir both Parts (A and B) separately. **NOTE:** A separate clean stir paddle must be used to stir each part to prevent component contamination. For partial unit mixing, measure out 4 parts by weight of Part A; 1 part by weight of Part B and pour into a clean mixing vessel, then mix both parts together using either hand tools or a slow speed power mixer. When liquids are mixed to a uniform color, slowly add Part C until desired mix consistency is obtained. Continue to mix until powder is completely wetted out and free from lumps (2 to 3 minutes).

CLEAN-UP:
Final clean up, use a Scotchbrite® pad or an epoxy sponge and a sufficient amount of cool to warm (not hot) water with a small amount of SL-86 added. SL-100 may be used to remove cured epoxy residue.

WORKING CHARACTERISTICS:
Fura-set is ideally installed when its temperature is between 65° to 80°F. At higher temperatures, the pot life is reduced. If the Fura-set temperature is lower, handling properties are reversed. The substrate temperatures may be as low as 40°F and damp, but standing water must be removed.

APPLICATION:
Spread mixed Fura-set with a notched trowel. Use a 1/4" x 3/8" square notched trowel for heavy ribbed backed tile and brick. Use 1/4" square notched trowel for smooth or shallow ribbed pavers. Set tile/floor brick into Fura-set providing a finished bed of 1/8" or greater. 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 notched 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. Discard any Fura-set that begins to set, become stiff, and/or lose tackiness. Per ANSI guidelines, check for proper bond by removing a freshly set tile/brick from the mortar and verifying proper adhesive transfer and coverage every few tiles. Allow 6 to 10 hours (depending on substrate temperature) to elapse before grouting floor.

CAUTION:
Protect from traffic for 24 hours, heavy traffic for 7 days.

PROTECTING NEW TILEWORK:
To avoid damage to finished tilework, schedule floor installations to begin only after all structural work, building enclosure and overhead finishing work, such as ceilings, painting, mechanical and electrical work are completed. Keep all traffic off finished tile floors until they have fully cured, or provide up to 3/4" thick plywood protection over Kraft paper for foot traffic to protect floors before installation materials have fully cured.

COVERAGE:
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Setting: square feet/gallon: using

¼" x ¼" square notch trowel	18 to 20 sq. ft./gallon
¼" x 3/8" square notch trowel	12 to 15 sq. ft./gallon

COLOR:
#998 Red

PACKAGING:
S-4500 is available in a 15-gallon (199 lb.) unit consisting of a 6-gallon bucket of part A (39 lbs. net), 2 gallons of part B (9.8 lbs. net) and two 75 lb. bags of part C filler powder.

SPECIFICATIONS:
Fura-set mortar shall be a 3-component mix, consisting of an inert aggregate and a special blend of activating hardeners and liquid epoxy resin and free from organic solvents as manufactured by Summitville Tiles, Inc., Summitville, Ohio. The material in the reacted state shall remain rigid and cohesive at temperatures up to 350°F. Fura-set chemical resistant epoxy mortar shall meet or exceed ANSI A118.3 and is approved by The United States Department of Agriculture for meat and poultry plants.

Chemical Resistance Guide for S-4500

CHEMICAL	S-4500 80°F	CHEMICAL	S-4500 80°F	CHEMICAL	S-4500 80°F	CHEMICAL	S-4500 80°F
Acetic Acid, Glacial	C	Bromine Water	R	Ethyl Bromide	N	Nitrotoluene	R
Acetic Acid 10%	N	Butanol	R	Ethylene Glycol Monobutarate	R	Phenol	N
Acetic Acid 3%	R	Butyl Acetate	C	Ferric Chloride	R	Phosphoric Acid 10%	R
Acetic Anhydride	N	Calcium Chloride	R	Formic Acid Glacial	N	Potassium Hydroxide 5%	R
Acetone	C	Calcium Hydroxide	R	Formic Acid 10%	C	Potassium Persulfate 50%	R
Ammonia (household)	R	Carbon Disulfide	C	Hydriodic Acid 20%	R	Pyridine 20%	C
Ammonium Bromide 30%	R	Carbon Tetrachloride	R	Hydrobromic Acid 10%	R	Saturated Sugar Solution	R
Alcohol	R	Chloroacetic 50%	N	Hydrochloric Acid 37%	R	Sodium Carbonate	R
Aniline	N	Chloroacetic 10%	N	Hydrochloric Acid 10%	R	Sodium Hydroxide	R
Barium Hydroxide	R	Chlorobenzene	N	Lactic Acid 3%	R	Soy Sauce	R
Beer	R	Chlorine Water (bleach)	R	Lactic Acid 10%	C	Sulfuric Acid 10%	R
Benzyl Acetate	C	Chromic Acid 10%	R	Lactic Acid 30%	N	Sulfuric Acid 45%	R
Benzyl Alcohol	N	Citric Acid 20%	R	Nitric Acid 50%	N	Sulfuric Acid 95%	N
Benzaldehyde	N	Cooking Grease	R	Nitric Acid 10%	R	Tetrahydrofuran	N
Benzene	N	Cresol	N	Nitrobenzene	N	Trisodium Phosphate	R
						Vegetable Oil	R
						Wine	R

R= Recommended N= Not Recommended C= Conditional, Contact Summitville Tiles, Inc before installation