



STR Mortar

Flowable, Shrinkage Compensated Structural Repair Mortar
w/ Ferrolok™ Integral Corrosion Inhibitor

DESCRIPTION

STR Mortar is a slow setting, pumpable, structural concrete repair mortar that exhibits excellent flexural properties, shear bond strength and compressive strength. This product is a blend of Portland cement, selected aggregates, proprietary admixtures and has the additional benefit of **US SPEC Ferrolok™**, an integral corrosion inhibitor. **STR Mortar** is ideal for form and pour applications that require extended working time, high fluidity and added depth requirements.

USES

STR Mortar is ideal for a wide variety of formed concrete repairs:

- Bridge Decks
- Tunnels
- Pavements
- Piers, docks and dams
- Warehouse floors and industrial plants
- Horizontal, vertical and overhead formed concrete

BENEFITS

- Resilient: Withstands freeze/thaw cycles and withstands corrosive elements
- Workability: Slow setting, excellent pumpability
- Performance: Excellent compressive strengths
- Consistent: Strict Quality Control testing and standards

STANDARDS

STR Mortar meets and exceeds the requirements of ASTM C-928 R1.

SURFACE PREPARATION

All surfaces in contact with **STR Mortar** shall be free of dirt, oil, grease, laitance and other contaminants that may act as bondbreakers. All unsound concrete should be removed to ensure a good bond. Best results will be obtained by sawcutting the area to be patched, providing uniform depth and firm bonding areas. Smooth, dense surfaces may need to be mechanically abraded to provide necessary bonding requirements. ACI recommends that the area to be patched should be saturated for 24 hours before placement. Remove any standing water. Surface should be saturated surface dry (SSD). For best results, scrub some of the mixed components into the prepared surface. Do not allow scrub coat to fully dry before placement. Always apply a test patch. Maintain contact areas between 40°F (4°C) and 90°F (32°C) prior to repair and during initial curing period.

PHYSICAL PROPERTIES

Compressive Strength (ASTM C-109*)

SET	3 HOURS	1 DAY	7 DAYS	28 DAYS
A NORMAL	600 psi (4.13 MPa)	8,000 psi (55.12 MPa)	9,500 psi (65.46 MPa)	12,000 psi (82.68 MPa)

Rate of Set (ASTM C-266*)

SET	INITIAL	FINAL
A NORMAL	:25	1:00

Length Change (ASTM C-157*)

STORAGE	% LENGTH CHANGE AVERAGE
28 DAY AIR	-0.042
28 DAY WATER	+0.035

Bond Strength (ASTM C-882*)

AGE	BOND STRENGTH
1 DAY	1,900 psi (13.09 MPa)
7 DAYS	4,100 psi (28.25 MPa)

Flexural Strength (ASTM C-78*)

AGE	BOND STRENGTH
7 DAYS	900 psi (6.20 MPa)
28 DAYS	1,000 psi (7.58 MPa)

Split Tensile Strength (ASTM C-496*)

AGE	BOND STRENGTH
28 DAYS	2,200 psi (15.16 MPa)

*Notes: 73°F (22.8°C) 55% humidity
A = 3.25 qts

Scaling Resistance of Concrete Surface Exposed to Deicing Chemicals (ASTM C-672) *Pass 25 cycles / 50 cycles

Packaging: 50 lb (22.7 kg) bag, 63 bags per pallet



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MIXING

For best results, use a mechanical mixer with rotating blades. Pre-wet mixer and empty excess water. Place 3.25 qts of cool, clean potable water per 50 lb bag in mixer, then add dry material. Mix on low RPM for a total of 3 to 5 minutes to achieve desired consistency. Mix only enough material that can be placed within working time. For placements greater than 3" in depth, **STR Mortar** must be extended by up to 30%, by weight, with clean, washed and dried 3/8" (1 cm) pea gravel. Do not blend excess water as this will cause bleeding and segregation. Do not use any other admixtures or additives.

PLACING

STR Mortar should be placed upon completion of mixing. Place material consistently, avoiding any air entrapment. Pour material into prepared sawcut area, ensuring that all pores and voids are filled. Force material against edge of repair, working away from center. Screed or float to the level of the surrounding concrete, then trowel, brush or broom to the desired finish. For vertical or overhead applications, air relief vents in forms should be placed at the highest point in the repair area to prevent voids from entrapped air. For further forming information, refer to ACI 347R "Guide to Formwork for Concrete". When rapid drying conditions exist (hot, dry, windy), use **US SPEC Monofilm ER** evaporation reducer for extended working time.

FINISHING AND CURING

Follow standard ACI curing practices. Exposed surfaces should be cured with a membrane forming compound such as **US SPEC Maxcure Resin Clear**, **Hydrasheen 15%** or **Hydrasheen 30%**.

STORAGE

Normal cement storage and handling practices should be observed. Store material in an interior, cool, dry place. Shelf life is one year in original, unopened container.

LIMITATIONS

In addition to limitations already mentioned, please note the following. Do not apply when temperature is below 40°F (4°C) or when the temperature is expected to fall below 40°F within 48 hours. Do not apply over surfaces that are frozen or contain frost. Do not apply over any active faults or cracks in the substrate without addressing any movement that may occur. Allow concrete to fully cure for 28 days before use of this product. Normal conditions working time is 20 minutes. Minimum application thickness is 3/4" and maximum application thickness is 10" with aggregate extension. Setting time will speed up in hot weather and slow in cold weather. For hot and cold weather applications, contact your US SPEC manufacturer's representative.

REGULATORY

Read and follow application information, precautions and Material Safety Data Information.

Right-to-know

This product contains Portland Cement (CAS#65997-15-1) and Crystalline Silica (CAS# 14808-60-7)

HMIS

Health 1, Fire 0, Reactivity 0

Prop 65

Warning! This product contains Crystalline Silica, a chemical known to the State of California to cause cancer or reproductive toxicity.

VOC Content

0 g/L

CAUTION

EYE AND SKIN IRRITANT

Contains Portland Cement (CAS# 65997-15-1) and Crystalline Silica (CAS# 14808-60-7). Do not allow contact with eyes or skin. Avoid breathing dust - silica may cause serious lung problems. There is limited evidence silica is a carcinogen. The use of gloves, goggles, dust masks and other protective clothing is recommended. If cement or sand particles get into eyes, rinse immediately with clean water and seek prompt medical attention.

TECHNICAL SERVICE

US MIX Co.

112 South Santa Fe Drive

Denver, CO 80223

Tel: 303.778.7227 Fax: 303.722.8426

Web Site: www.usspec.com

NOTICE OF LIMITED WARRANTY US MIX Co. (manufacturer) warrants to buyer that this product at the time and place of shipment is of good quality and conforms to the manufacturer's specifications in force on the date of manufacture when used in accordance with the instructions hereon. Manufacturer cannot warrant or guarantee any particular method of use, application or performance of the product under any particular condition. This limited warranty cannot be extended or amended by manufacturer's sales people, distributors or representatives or by any sales information, specifications of anyone other than the manufacturer. Liability under this warranty is expressly limited to refund of the purchase price.

LIMITATION OF WARRANTIES AND LIABILITY Buyer assumes all risks associated with the use of this product. Manufacturer expressly disclaims all warranties expressed or implied including the warranties of merchantability and fitness for a particular purpose and all other warranties otherwise arising by operation of the law, course of dealing, custom, trade or otherwise. Buyer's exclusive remedy if this product is proven to be defective is limited to refund of purchase price by the manufacturer. Refund shall only be available if the buyer notifies manufacturer in writing within thirty days following discovery of any defect. Written notice shall be forwarded to US MIX Co. at 112 South Santa Fe Drive, Denver, Colorado 80223. No claim can be made twelve months after purchase of the product. Twelve months after the purchase manufacturer's duties with respect to the product and limited warranty shall be presumed to have been satisfied. Manufacturer in no event is liable for consequential damages.

Yield: 50 lbs (22.7 kg) will fill approximately 0.43 ft³ (0.012 m³) when 3.25 qts mixing water is used.