



# ChemMasters

SPECIALTY CONSTRUCTION PRODUCTS

# CHEMSPEED 75

VERY RAPID SETTING CONCRETE  
REPAIR MORTAR

## P R O D U C T      D A T A

### DESCRIPTION

ChemSpeed 75 is a one component, high performance structural repair mortar. It produces high early strengths at a wide range of temperatures. Areas repaired with ChemSpeed 75 can be returned to rubber wheeled traffic in only 2 hours (depending on temperature). ChemSpeed 75 meets ASTM C928 for rapid repairs of concrete and can be extended with pea gravel up to 60% for deep placements.

### USES

- Structural filling holes subject to heavy traffic including concrete decks, bridges and roadways
- Full-depth patching of horizontal concrete
- Fast setting repairs to high load concrete such as loading docks and industrial floors
- Repairs adjacent to construction and expansion joints

### ADVANTAGES

- Initial set in 13-19 minutes at 72°F (22°C)
- Repairs from 0.50 inch (1.3 cm) to full depth
- Nonshrink with exceptional bond strength
- High early strength gaining 3000 psi (21 MPa) in 2 hours at 72°F (22°C)
- May be placed at temperatures down to 20°F (-6.7°C) if ACI 306 cold weather concreting standards are followed
- Accepts rubber wheeled traffic over road surfaces or industrial facilities in one hour
- Resists freeze-thaw cycles and deicing chemicals.
- May be extended for economical placement at depths greater than 1.5 inches (4 cm)

### PACKAGING AND ESTIMATING GUIDE

ChemSpeed 75 is packaged in poly lined, 50 pound (22.7 Kg) bags, shipped 60 bags per pallet.

Yield per bag	0.42 Ft <sup>3</sup>	.012 M <sup>3</sup>
With 60% extension	0.60 Ft <sup>3</sup>	.017 M <sup>3</sup>

Material Estimate	10 Ft <sup>2</sup> @ 0.5 in.	.9 M <sup>2</sup> @ 1.3 cm
With 60% extension	3.6 Ft <sup>2</sup> @ 2 in.	.33 M <sup>2</sup> @ 5 cm

### TECHNICAL DATA

ASTM C 928, R3 standard specification for packaged, dry, rapid-hardening, cementitious materials for concrete repairs

State of Ohio Department of Transportation Supplemental Specification 819

Set Times (ASTM C 191 / Vicat Method) at 72°F (22°C)  
Initial: 13-19 minutes      Final: 20-25 minutes

Compressive Strength (ASTM C 109) 2 inch cubes

1 hour	1500 psi	10 MPa
2 hours	3000 psi	21 MPa
1 day	6000 psi	41 MPa
3 days	7000 psi	48 MPa
7 days	8000 psi	55 MPa
28 days	9000 psi	62 MPa

Flexural Strength (ASTM C-348)

1 day	850 psi	6 MPa
7 days	1000 psi	7 MPa
28 days	1200 psi	8 MPa

Slant Shear Bond Strength (ASTM C-882)

1 day	2500 psi	17 MPa
7 days	3000 psi	21 MPa
28 days	3200 psi	22 MPa

Scaling Resistance (ASTM C672)

	weight loss in pounds per square foot	
	CaCl <sub>2</sub>	NaCl
25 cycles	0.003	0.067
50 cycles	0.005	0.084

Freeze/Thaw Durability (ASTM C-666A)

percent RDM      98.3

Rapid Chloride Permeability (ASTM C1202 / AASHTO T277)

typical from 3 days moist cure / 39 days air cure  
coulombs      960      very low

### DIRECTIONS

*For patching repairs at depths greater than 1.5 inches (3.8 cm), an aggregate extension is required.*

**SURFACE PREPARATION:** Saw cut edges of area to be repaired to a minimum depth of one inch. Square cut sides for optimum



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performance and appearance. Do not cut the reinforcement. Remove all unsound concrete to be replaced along with all contaminants including dust, dirt, oil, grease and asphalt. Any exposed reinforcing steel should be cleaned to bright metal and coated with an epoxy to prevent further oxidation and deterioration.

Unless a bonding agent will be used, saturate prepared area with clean, potable water. Remove any puddles or standing water immediately before placing mortar so that concrete is in a saturated surface-dry condition (SSD)..

**MIXING:** Use a paddle type mortar mixer equipped with rubber tipped blades for blending ChemSpeed 75. Start the mortar mixer. Before beginning first batch, pre-wet the blades and bucket with clean water, then dump out water.

Use no more than 2.5 quarts (2.4 liters) of water per bag of ChemSpeed 75. Pour up to 2.5 quarts (2.4 liters) of water per bag of ChemSpeed 75 into mixer first. Add the ChemSpeed 75 and mix for 3-5 minutes until mixture is thoroughly wetted out and uniform in texture.

For patches from 1/2 - 1 inch deep, ChemSpeed 75 may be used neat. For deeper repairs, add up to 30 pounds (13.6 Kg) of clean, hard, SSD 3/8 inch (0.95 cm) pea gravel per bag to the mixing water prior to adding the ChemSpeed 75. Mix mortar for 3 minutes. Mortar should be uniform in texture with pea gravel evenly dispersed.

Do not mix more mortar than can be placed and finished in 10 minutes.

**PLACEMENT:** The application range for ChemSpeed 75 is from 20° to 85°F (-7° to 29°C). Follow ACI recommended concreting practices for hot and cold weather. After removing all standing water from the area to be patched, thoroughly scrub in a thin layer or bond coat onto the surface with a stiff bristled broom or brush. Do not dilute the bond coat. Do not apply more bond coat than can be covered with mortar before the bond coat dries. Do not re-temper the bond coat. After the bond coat, immediately place ChemSpeed 75 mortar into prepared area. Carefully tamp and compact mortar under reinforcing steel, into corners and around edges, filling voids and eliminating air pockets. ChemSpeed 75 should be placed at full depth rather than in lifts or layers. Screed to grade. ChemSpeed 75 is designed to have a float or broom texture.

**CURING:** If ChemSpeed 75 will not be top-coated, wet cure for a minimum of 1 day followed by an application of a curing compound that meets ASTM C309 or ASTM C1315. ChemMasters produces a wide range of curing compounds and curing & sealing products that meet these specifications.

If ChemSpeed 75 is to be top-coated with an epoxy or methyl methacrylate coating, allow ChemSpeed 75 to cure for 4 hours at 72°F (22°C) before priming or coating. If the ChemSpeed 75 is to be coated with a polyester or vinyl ester coating, allow 24 hours of cure at 72°F (22°C) prior to priming. Ensure that the ChemSpeed 75 is prepared per the coating surface preparation instructions prior to coating application. ChemMasters produces a wide range of polymer coatings and toppings for floors. Contact your ChemMasters representative for additional information.

#### LIMITATIONS

- At temperatures over 90°F (32°C), cool the mixing water and bags to extend working time. Cover with wet burlap after placement to cool surface until final set is achieved.
- In cold weather, below 50°F (10°C), warm the material and water to result in a 70°F (21°C) mixed temperature and preheat the area to be patched.
- Cover patches with insulating materials in cold ambient temperatures below 40°F (5°C).
- Do not featheredge. Minimum depth is 0.5 inches (1.3 cm).

#### STORAGE

Cover unopened bags and store on pallet in a cool, dry area. Shelf life of properly stored material is 18 months from date of manufacture.

#### CAUTIONS

May cause eye and respiratory tract irritation. Over exposure may cause skin irritation. Do not take internally. Keep out of reach of children.

Make certain that the most current versions of the product data sheet and MSDS are being used. Contact ChemMasters customer service at 1.800.486.7866 to verify the most current version.

Proper application is the responsibility of the user. ChemMasters can only make technical recommendations and cannot provide quality control on the jobsite.

#### ***This Product is Formulated and Labeled for Industrial and Commercial Use Only***

*FOR BEST RESULTS AND SAFEST USAGE, USER IS SPECIFICALLY DIRECTED TO CONSULT THE CURRENT MATERIAL SAFETY DATA SHEET AND PACKAGE LABEL FOR THIS PRODUCT*

*We warrant our products to meet our published specifications and to be free from defects in materials and workmanship to the acceptable quality levels defined in these specifications. If acceptable quality levels are not specified, the acceptable quality levels will be those normally supplied by us for the product. We make no guarantee of the results to be obtained from the use of our products. The determination as to the adaptability of any of our products to the specific needs of the Buyer is solely Buyer's prerogative and responsibility. We are glad to offer suggestions on the use of our products. Nevertheless, there are no warranties given except such expresses warranties offered in connection with the sale of a particular product. Our liability shall be limited to replacement of, or refund of an amount not to exceed the purchase price attributed to, the goods as to which such claim is made. Our selection of one of these alternatives shall be Buyer's exclusive remedy. IN NO CASE SHALL WE BE LIABLE FOR CONSEQUENTIAL OR SPECIAL DAMAGES, EVEN IF WE HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. THE FOREGOING WARRANTIES ARE IN LIEU OF ALL OTHER WARRANTIES, GUARANTEES, CO-CONDITIONS AND REPRESENTATIONS, EITHER EXPRESSED OR IMPLIED, WHETHER ARISING UNDER ANY STATUTE, COMMON LAW, USAGE OR TRADE, COURSE OF DEALING OR OTHERWISE, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.*