



ChemMasters®

ChemSpeed™ 65

Very Rapid Setting Polymer Modified Concrete Repair Mortar

SPECIALTY CONSTRUCTION PRODUCTS

P R O D U C T D A T A

DESCRIPTION

ChemMasters' ChemSpeed 65 is a Portland cement based high strength, very rapid setting, polymer modified, structural concrete repair mortar that can be used over a wide temperature range and requires only water for mixing. ChemSpeed 65 is suitable for horizontal or formed vertical applications and may be extended up to 60% with pea gravel for deep placements.

USES

- Filling structural holes subject to heavy traffic including concrete decks, bridges, and roadways
- Fast setting repairs to high load concrete such as loading docks and industrial floors
- Repairs: construction expansion joints, highway overlays, parking structures, ramps, concrete floors, truck docks, heavy industrial locations, formed vertical and horizontal patching

ADVANTAGES

- Easy to use - just mix with water
- Initial set in 25 to 30 minutes at 72°F (22°C)
- Repairs from 0.50 in (1.3cm) to full depth
- Non-shrink for exceptional bond strength
- High early strength gaining 2500 psi (17 MPa) in 1 hour at 72°F (22°C)
- Meets or exceeds many states specifications Standard Specification 705.21
- Meets or exceeds ASTM C928 R 3 standard specification for packaged, dry, rapid hardening, cementitious materials for concrete repairs
- May be placed at temperatures from to 40°F (4.4°C) to 85°F (29.4°C)
- Accepts light rubber wheeled traffic in one hour
- Resists freeze-thaw cycles and deicing chemicals
- May be extended for economical placement at depths greater than 1.5 in (4cm)

Packaged / Part Number

50 lb (22.7 kg)	56 per pallet	F2050.50
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TECHNICAL DATA

Freeze/Thaw Durability ASTM C 666

Procedure A, 300 cycles	>94%
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Set Times ASTM C191 / Vicat Method @ 72°F (22°C)

Initial	Final
25 minutes	30 minutes

Compressive Strength ASTM C109 Average of Three 2 inch (50 mm) Cubes

Time	psi	MPa
1 hr	2500	17
2 hrs	3500	24
1 day	5000	34
3 day	5500	38
7 day	5900	40
28 day	6500	45

Bond Strength-Slant Shear ASTM C882

Days	psi	MPa
7	2,650	18

Flexural Strength ASTM C78

Time	psi	MPa
4 hr	475	3.3
3 day	1000	7
28 day	1200	8

Shrinkage ASTM C157 Average

28 Day	50% relative humidity	-0.095%
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Expansion ASTM C157 Average

28 Day	100% relative humidity	0.033%
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Yield per 50 lb (22.7 kg) bag

Water	3.25 qt	3.07L
Neat	0.42 ft ³	0.012 m ³
60% Extension	0.60ft ³	0.017m ³



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DIRECTIONS

Surface Preparation:

- If using **ChemSpeed 65** as replacement concrete, repair area must be free of all dust, dirt, loose concrete, oil, grease, old asphalt, curing and sealing compounds, form release agents, efflorescence, or other contaminants that might interfere with adequate bond. Square cut perimeter of holes to a minimum depth of 1" (2.5 cm), undercutting to sound concrete when possible.
- Exposed reinforcing steel (NACE 3 Standard SSPC SP6) must be cleaned to bright metal removing all rust or signs of oxidation. Chip out concrete behind or under rebar to a depth of 3/4" (1.9 cm). Coat any exposed steel with **Polyweld EPX^{CI}** or other corrosion inhibiting bonding agent as specified and allow to dry.
- Immediately prior to placement of **ChemSpeed 65** remove any remaining dust or dirt with vacuum or oil free compressed air. Saturate the prepared area with clean, potable water to the point of rejection. Remove any puddles or standing water immediately before placing mortar ensuring concrete is Saturated Surface Dry (SSD) condition.
- To build a new area, follow all normal surface preparation procedures for concrete placement including compacting the substrate, forming the area, addressing drainage issues, etc. Apply form release agent to forms and allow to dry.
- **Mixing:** Condition the dry mortar and clean potable mix water to 65° to 75°F (18° to 24°C). Do not add additional water or re-temper after initial mixing procedure. When mixing one bag use a variable speed drill with a jiffler paddle. For multiple bags or deeper pours use a mortar mixer. For deeper pours add up to 30 lbs. of clean stone to the mix. Add **ChemSpeed 65** to the mixing vessel. Continue mixing for approximately 3 minutes to achieve a lump free consistency. Do not over mix. Add up to 1/2 pint of additional water per bag to adjust to the desired finishing consistency. Over watering causes excessive shrinkage and lower strengths. In exterior applications, check the air content of the mix prior to pouring. If the air content is under 3% add up to 1/2 ounce of chemical air entraining agent per bag to get the air content up to 6%.
- **APPLICATION:** Scrub a mortar bond coat into the repair area being sure to fill all voids and pores. Do not allow bond coat to dry before placement of mortar. Poor substrate conditions may require using a chemical bonding agent. Compact mortar firmly into repair area filling all voids and air pockets paying special attention to spaces beneath reinforcing steel. Vibrators are recommended for deeper pours or where reinforce-

ing steel is used. Vibrators are recommended for deeper pours or where with floats, trowels, or brooms.

- **CURING: ChemSpeed 65** continues to gain strength as long as it is damp. Apply a curing compound that meets ASTM C309 or ASTM C1315 such as **Polyseal WB, Safe Cure & Seal 309 or Safe Cure & Seal 1200** as soon as all bleed water has dissipated and application will not mar the surface. Call ChemMasters' Technical Service Department for recommendations regarding other curing methods. Light foot traffic may be allowed in approximately 24 hours.
- **Extreme Temperature Application: Temperatures above 85°F (29.4°C)** - Cool the mixing water and bags to extend working time. Wet curing is required. Cover with wet burlap and polyethylene to regulate evaporation until final set is achieved. **Follow ACI 305 Moist Cure Procedure for Hot Weather Concreting Standards.**
- **Temperatures below 50°F (10°C):** Warm the material and water to 70°F (21°C) before placement. Warm the area to be patched to at least 50°F (10°C) until initial set. Then insulate using curing blankets to maintain a temperature above freezing for at least 3 days. **Follow ACI 306 Cold Weather Concreting Standards.**

LIMITATIONS

- Do not apply to frozen or frosted surfaces.
- Do not featheredge. The minimum depth is 0.5 in (1.3cm).

STORAGE

Store shrink wrapped bags in a cool dry location away from moisture and humidity. Shelf life of properly stored material is 12 months from the date of manufacture.

Precautions:

DANGER: Harmful if swallowed. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Causes serious eye damage. May cause respiratory irritation. Suspected of causing cancer. May cause damage to organs through prolonged or repeated exposure if inhaled. Precautionary Statements: Obtain special instruction before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapours/spray. Wash hands and skin thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves/protective clothing/eye protection/face protection.

All label precautions and the Safety Data Sheet must be fully understood before using this product.

KEEP OUT OF REACH OF CHILDREN

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.