



ChemMasters®

ChemSpeed 65™ DBR

Very Rapid Setting Concrete
Repair Mortar &
Dowel Bar Retrofit (DBR)

SPECIALTY CONSTRUCTION PRODUCTS

P R O D U C T D A T A

DESCRIPTION

ChemMasters' ChemSpeed65DBR Portland cement based high strength, very rapid setting, structural concrete repair mortar can be used over a wide temperature range and requires only water for mixing. **ChemSpeed 65DBR** is suitable for horizontal or formed vertical applications and may be extended up to 60% with pea gravel for deep placements.

USES

- Dowel Bar Retrofit (DBR) filling of dowel bar slots across transverse cracks in highway pavement.
- 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 25-30 minutes at 72°F (22°C)
- Repairs from 0.50 inch (1.3cm) to full depth
- Exceptional bond strength
- High early strength gaining 2500 psi (17 MPa) in 1 hour at 72°F (22°C)
- Meets or exceeds ASTM C 928 R 3 standard specification for packaged, dry, rapid hardening, cementitious materials for concrete repairs
- May be placed at temperatures from 40°F (4.4°C) to 85°F (29.4°C)
- 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 (4cm)

Packaged in Poly Lined Bags / Part Number

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

Set Times ASTM C191 / Viacat Method @ 72°F (22°C)

Initial	Final
25 minutes	30 minutes

Compressive Strength ASTM C109 Average of Three 2" /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 C 882

Days	psi	MPa
7	2650	18

Flexural Strength ASTM C 78

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

Shrinkage ASTM C 157 Average

28 day	50% relative humidity	-0.095%
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Expansion ASTM C 157 Average

28 day	100% relative humidity	0.033%
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Freeze/Thaw Durability ASTM C 666

Procedure A, 300 cycles	>94%
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Yield per 50 lb (22.7 kg) bag		
Neat	0.42 ft ³	0.012 m ³
60% extension	0.60ft ³	0.017m ³

DIRECTIONS

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

Surface Preparation: Saw cut edges of area to be repaired, squaring sides for optimum performance and appearance. Remove any dust, dirt, oil, grease, asphalt, loose material and unsound concrete using oil free compressed air or vacuum. Any exposed reinforcing steel should be cleaned to the NACE 3 standard SSPC SP6 removing all signs of oxidation and rust. Then coat with Dura-guard 100 to prevent further oxidation and deterioration.

Prior to mixing mortar, saturate prepared area with clean, potable water. Remove any puddles or standing water immediately before placing mortar.

Mixing: Use a paddle type mortar mixer equipped with rubber tipped blades to blend **ChemSpeed 65DBR**.

- Pre-wet the blades and bucket with clean water, empty bucket, start mortar mixer.
- Pour 3.25 qt (3L) of water per bag of **ChemSpeed 65DBR** into mixer
- Add **ChemSpeed 65DBR**, mix for 3 to 5 minutes until mixture is thoroughly wetted out and uniform in texture.

For high volume repairs, add up to 30 lbs (13.6kg) of clean, hard, SSD 3/8" (0.95cm) pea gravel per bag to the mixing water prior to adding **ChemSpeed 65DBR**. Mix mortar for 3 minutes. Mortar should be uniform in texture with pea gravel evenly dispersed. Mix only what can be placed and finished in 15 minutes.

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After dowel and board placement use oil free air to remove dirt and dust. Place mixed **ChemSpeed 65 DBR** mortar into the slot. Consolidate the patching material using a vibrator. Finish to produce an even surface. Cut a 1 1/2" (4cm) deep by 1/4" (0.6cm) wide saw cut using a hand pushed single blade saw to reestablish the crack. Make the saw cut within 4 hours of placing the **ChemSpeed 65DBR**.

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.**

CURING:

Temperatures between 50 and 80°F (10 and 26.7°C) cure the patches with ChemMasters' Safe Cure 1200, Safe Cure Clear, Safe Cure & Seal 309, or Polyseal WB. Curing is always necessary for durable repairs and to minimize premature surface drying and thermal shrinkage cracks. When temperature exceeds 80°F (26.7°C) or are below 50°F (10°C) cure as noted above in **Extreme Temperature Application**.

LIMITATIONS

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

STORAGE

Cover unopened bags and store on pallets in a cool, dry area avoid moisture and humidity. Shelf life of properly stored material is 12 months from date of manufacture.

CAUTIONS

May cause eye and respiratory tract irritation. Over exposure may cause skin irritation. Do not take internally. Use current product data sheet. Call ChemMasters at 1-800-486-7866 for technical assistance.

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.