

DURAPATCH INDUSTRIAL™

Rapid Strength, Flowable Repair Mortar with Extended Work Time

MANUFACTURER

L&M Construction Chemicals, Inc.
14851 Calhoun Road
Omaha, NE 68152
Phone: (402)453-6600
FAX: (402)453-0244
Website: www.lmcc.com

PRODUCT DESCRIPTION

DURAPATCH INDUSTRIAL is a flowable, high strength cement-based patching system. This non-shrink, flowable repair mortar offers high strength, sulfate resistance, elevated temperature stability, increased bondability with a lower water/cement ratio for improved density. The time-proven benefits of the positive bonding and freeze-thaw stability features assure simple, precise patch repairs of warehouse and industrial plant floors.

Basic Use: The non-metallic, non-staining and high strength features of DURAPATCH INDUSTRIAL assure a concrete repair mortar for use in high humid, cold and wet conditions. Its excellent workability, wear resistance and polymer-reinforced bond strength make it ideal for patch repairs in areas that require a very durable repair material, such as rail structures and industrial traffic areas.

FEATURES & BENEFITS

- *Permanent Repair.*
- *Easy to place formula.*
- *High Abrasion Resistance.*
- *Rapid Strength Gain.*
- *Low Maintenance.*

ESTIMATING

DURAPATCH INDUSTRIAL is available in 50 lb. (22.7 kilogram) bags. One bag yields approximately 0.43 cubic feet (12.5 liters).

Coverage: 10 square feet (.9 square meter) at ½ inch (13 mm) thick. A 60% extension using 3/8" (10-13 mm) aggregate yields approximately 0.63 cubic foot (18 liters).

TECHNICAL DATA

Applicable Standards:

ASTM-C 928

Data on DURAPATCH INDUSTRIAL specimens made at 72°F (22°C). All data based on typical performance. Consistency:..... flowable
Set Time, ASTM-C 191: Initial.....50 min.
Final..... 120 min.

Compressive Strength, ASTM-C 109, psi (MPa)
4 hours 1500 (10)
1 day..... 4000 (27)
7 days 6000 (41)
28 days 8000 (55)

Flexural Strength, ASTM-C78, 28 days 1040(7)

Tensile Strength, ASTM-C 190, 28 days 462 (3)

Bond Strength, ASTM-C 882, 28 days..... 2200 (15)

Taber Abrasion Resistance:

DURAPATCH Industrial weight loss,
1000 cycles:1.25% (avg.) weight loss
Normal 3000 PSI Concrete weight loss,
1000 cycles:3.46% (avg.)

INSTALLATION

Surface Preparation: Perform surface preparation in compliance with ICRI Technical Guideline No. 03730. Saw cut a minimum of 1/2 inch (13mm) deep to form patch boundaries. Abrade concrete surfaces to a medium texture (Ref: CSP 5 or greater, ICRI 03732).

Remove all unsound concrete not bonded to the rebar down to 3/4" (20 mm) below the rebar. Remove rust from the rebar. Flush with clean water to remove all dust. Saturate concrete surfaces to saturated, surface dry (SSD) conditions. Remove standing water before placing patch.

Equipment: Have proper measuring containers, tools and adequate labor to place the patch. For best mixing results, use a gas operated mortar mixer or a continuous type mixer. For small batches, use a minimum ½" slow speed drill fitted with a mixing paddle. Do not mix by hand.

Addition of Aggregate: In patches deeper than 2 inches (50 mm), up to 60% by weight (30 pounds per bag) of washed, sound 3/8" (10 mm) aggregate may be added to reduce cost without affecting the high strength performance.



Mixing: Locate the mixer close to the repair areas. Mix no more product than can be placed within 30 minutes.

Adding proper water content is critical. Add 2 3/4 to 3 1/4 quarts (2.5 - 3.1 L) of water per bag depending on consistency desired.

Mixing order: Pour clean water into mixer. Add powdered **DURAPATCH INDUSTRIAL**; mix until uniform in consistency (3-5 minutes) and place. Add damp aggregate for deep patches. Mix for another minute and then place.

Placing: In prepared area immediately place from one side to the other. Work firmly into bottom and sides of patch area to fill voids and assure proper bond. Level and screed to elevation and existing concrete. Minimal finishing is required. Do not re-temper. Do not overwork the surface. Do not featheredge.

Cold weather: In conditions below 40°F (7°C) heat the concrete until warm. Pre-condition **DURAPATCH INDUSTRIAL** to warmer temperature(70°F±). Use 2 3/4 quarts (2.5 liters) of warm water per bag to hasten rate of hardening. Do not use accelerators or anti-freeze.

Hot weather: In conditions over 85°F (29°C) use ice water and keep patch cool. Use 3 1/4 quarts (3 liters) of water per bag.

Curing: Cover with wet burlap or poly to protect the freshly placed **DURAPATCH INDUSTRIAL** from the stresses of premature moisture loss due to high winds, heat or sun. At 72°F (22°C) this product will take foot traffic in 8 hours.

FOR BEST RESULTS:

DURAPATCH INDUSTRIAL is cement-based. Follow ACI recommended practices. Mix no more than can be used in 30 minutes. Perform surface preparation in accordance with ICRI Technical Bulletins No. 03730 and 03732. Do not add accelerators or anti-freeze. Do not add sand. Do not retemper. Do not featheredge. Minimum depth 1/4 inch (6mm).

PRECAUTIONS

Contains portland cement and silica sand. Freshly mixed cement is highly alkaline and may cause skin injury. Avoid creating and inhaling dust. Provide ventilation and respiratory protection. Wear skin and eye protection. Dust mask recommended.

Please refer to Product Material Safety Data Sheet (MSDS) before using.

STORAGE/SHELF LIFE

DURAPATCH INDUSTRIAL bags are to be kept in dry storage to prevent water contamination. Shelf life is one (1) year in unopened bags when properly stored.

FAX ON DEMAND/WEBSITE

L&M's exclusive Fax On Demand and its convenient Internet website offer instant access to Tech Data Sheets, Material Safety Data Sheets, product updates, and other useful information. Simply dial 800-839-9887 or visit www.lmcc.com and follow the easy steps.

SHORT SPEC

03730: Concrete Rehabilitation: Flowable, cement-based, repair mortar, minimum 4000 psi (27 MPa) in 24 hours. "DURAPATCH INDUSTRIAL" by L&M Construction Chemicals, Inc.

LIMITED WARRANTY

This product is warranted to be free of defects in material and workmanship, and conform to L&M Construction Chemicals ("L&M") quality control standards. All recommendations, statements and technical data herein are based on tests we believe to be reliable and correct, but accuracy and completeness of said tests are not guaranteed and are not to be construed as a warranty or guaranty of any kind, expressed or implied including but not limited to, an implied warranty of merchantability or an implied warranty of fitness for a particular purpose. Satisfactory results depend upon many factors beyond L&M's control. User shall rely on his or her own information and tests to determine suitability of the product for the intended use and user assumes all risk, loss, damage, expense and liability resulting from his or her direct use, indirect use or consequential to their use of the product. L&M shall not be liable to the buyer or any third person for any injury, loss or damage directly or indirectly resulting from use or inability to use the product. L&M's sole responsibility shall be to replace that portion of the product which proves to be defective. Any warranty claim must be made within six (6) months from the date of the claimed breach. This limited warranty applies only if the product was properly installed and used according to all instructions and was properly stored prior to use.

For Professional Use Only.

©2005, L&M Construction Chemicals, Inc

#708081-3
February 7, 2005