

GUIDE TO CONCRETE REPAIR

In repair and restoration work it is recommended to first take care of the cause before repairing the effect. Many times a condition survey is needed to determine the cause(s) and to plan the proper, most cost-effective approach to correct the problem.

In repair and restoration surface preparation is very important. The best of products with poor surface preparation is no better than the lesser product with the proper surface preparation.

SURFACE PREPARATION & MIXING

I.K.E. Identify what the problem is
Know and understand the problem
Eradicate the cause before addressing the effect

Surface Preparation: A necessity for a successful application:

- Water-blast, sand-blast, scabblor, scarifier, grinder, needle gun, hammer chisels, shot-blasting
- Provide a high profile substrate for a good mechanical bond
- Remove excessive or complex edge conditions
- Have a defined edge...saw cut or use a grinding wheel to create a clean defined edge to which you will work the repair mortar

SSD...concrete substrate to be in a Saturated-Surface-Dry condition so that the concrete will not absorb water from the repair mortar

Mixing methods: drill & paddle, mortar mixer, concrete mixer (when stone added), pump, by hand

When mixing less than a full bag always first mix the bag so that a representative sample is obtained.

Add the powder to the water

Water requirements stay the same regardless if the material is used neat or if pea gravel is used

Application methods: by hand, form & pump, form & pour, dry packing, pneumatic (spraying), pneumatic (shotcrete)

ICRI Guideline No. 03732 and the ACI 546 Concrete Repair Guide provides an in depth description of various types of surface preps, substrate condition surveys, and selection & specifying methods of surface preparation

DAYTON SUPERIOR REPAIR MORTARS

Vertical / Overhead:

Re-Crete 5 & Re-Crete 20

- Cost-effective repair mortar with no polymers or fibers
- Min. thickness 1/8", max. 2", neat
- Extend with clean washed stone > 2" per Data Sheet
- Water substitution with Ad Bond (J-40), 1:1, recommended for enhanced performance

Architectural Finish

- Polymer modified
- Use for rubbing, smoothing, resurfacing repairing vertical surfaces
- Colored blended to a light gray
- 30 minute working time
- Featheredge to 1/4" application depth

Perma Patch V/O

- One component W/water or 2-component W/ approved admixture
- High strength
- Ideal for form & pour or horizontal applications
- Formulated for vertical / overhead applications
- High bond strength
- Shrinkage compensated
- Can be sprayed or pumped through small volume pneumatic equipment
- Rapid strength gain
- Can be extended with aggregate for deep applications
- Very low permeability

Perma Patch V/O 2C

- Two component polymer modified mortar
- Excellent resistance to freeze-thaw
- Contains calcium nitrite corrosion technology
- High early strength
- High bond strength

HD-25

- Designed for vertical and overhead applications
- Polymer modified
- Min. thickness 1/4", max. 2" neat
- Extend with clean washed stone > 2" per Data Sheet
- More rapid initial strength gain than Polyfast

Refer to www.daytonsuperior.com for latest Technical Data Sheet and MSDS
1125 Byers Road, Miamisburg OH 45342
Customer Service: (888) 977-9600
Technical Assistance: (866) 329-8724

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CONTINUED

Civil / Structural VO

- Vertical or overhead applications
- Formulated for use in spray applications using the wet process
- Can also be applied by hand or trowel
- Contains a corrosion inhibitor
- Very high compressive strengths

FORM & POUR:

Civil / Structural FPX

- For form & pour or horizontal applications
- Extended with blended aggregate
- Contains a corrosion inhibitor
- Long working time

Dayton Perma Patch F/P

- Self finishing
- Up to 40 minute working time

HORIZONTAL:

Polyfast FS, Polyfast LPL

- Designed for vertical and overhead applications
- Polymer modified
- Min. thickness 1/8", max. 2", neat
- Extend with clean washed stone > 2" per Data Sheet
- Easily shaped and finished
- pleasing concrete gray color

Perma Patch

- Pourable consistency
- Very rapid setting
- Polymer modified, fiber reinforced, silica fume enhanced
- Min. thickness 1/2", max. 2", neat
- Extend with clean washed stone > 2" per Data Sheet
- Approved by many State DOT Agencies

Special Patch 2C

- Two component polymer modified mortar
- Shrinkage compensated
- High early strength
- Good resistance to freeze-thaw and impact

HD-50

- Pourable consistency
- Very rapid setting
- Polymer modified, fiber reinforced
- Min. thickness 1/2", max. 2", neat
- Extend with clean washed stone > 2" per Data Sheet
- Capable of being extended up to 80% (40# stone) per bag
- Most popular DOT approved repair mortar

HD-45

- Pourable consistency
- Very rapid setting
- Min. thickness 1/2", max. 2", neat
- Extend with clean washed stone > 2" per Data Sheet
- Capable of being extended up to 80% (40# stone) per bag

HD-45 LPL

- Extended working time of 45 min. @ 72°F (22.2°C)
- Pourable consistency
- Shrinkage compensated
- Min. thickness 1/2", max. 2", neat
- Extend with clean washed stone > 2" per Data Sheet

Thin Resurfacer 1C.

- Polymer modified
- Min. thickness 1/16", max. 1/2" and cannot be extended
- Substitute 1 qt. Of water with J-40 for enhanced performance

CM 2000

- Two-component Ultra Low Viscosity Rapid Curing Polyurea Repair Material
- Designed for repair of hairline cracks, divots & spalls where down time is critical
- Excellent penetration into cracks/concrete pores due to ultra low viscosity
- Cures at temperatures as low as -40°F
- good chemical resistance
- Compressive strength of CM 200 mortar: 4,400 psi
- Can accept traffic in 20 minutes @ 70°F

Rapid Resin Repair

- 100% solids 3-component low modulus repair material
- Non-shrink
- Chemically resistant
- Cures from -20°F to 130°F
- Meets USDA requirements
- "0" VOC
- Low odor

Waterstop

- Rapid setting hydraulic cement
- For plugging & stopping water or fluid leaks in concrete or CMU
- Initial set 2 1/2 min., final set 3 1/2 min.
- Non-corrosive, non-rusting



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