

## TECHNICAL DATA SHEET

### DESCRIPTION

Perma Patch FP is a specially designed patching and structural repair product for any maintenance and new construction projects where prolonged working time up to 40 minutes and fast strength in two to three hours is required.

### USE

Can be used for all structural and general horizontal concrete repairs (interior, exterior, above and below grade) where sufficient working time during placement and high early strength is required.

### FEATURES

- Flowable/self consolidating
- Up to 40 minutes working time
- Ideal for horizontal or formed vertical/overhead applications

### PROPERTIES

Initial Setting Time @ 73°F (ASTM C403) 70 min.  
 Final Setting Time @ 73°F (ASTM C403) 85 min.

Compressive Strength ASTM C-109:  
 3 hours: >1000 psi (6.89 MPa)  
 1 day: >2500 psi (17.24 MPa)  
 7 days: >6000 psi (41.37 MPa)  
 28 days: >8500 psi (58.62 MPa)

Flexural Strength ASTM C-78:  
 7 days: 1000psi  
 28 days: 1100 psi

Splitting Tensile ASTM C-496  
 1 day 200 psi  
 7 days: 525 psi  
 28 days: 675 psi

Direct Tensile CRD C-164:  
 1 day: 125 psi  
 7 days: 150 psi  
 28 days 190: psi

Modulus of Elasticity ASTM C-469:  
 28 days 4.5 x 10<sup>-6</sup> psi

Bond Strength ACI 503R:  
 1 day 150 psi  
 7 days: 175 psi  
 28 days: 250 psi

Coefficient of thermal expansion CRD C-39 modified:  
 4.9 x 10<sup>-6</sup> o in/in/°F

Freeze/thaw resistance ASTM C-666 procedure A:  
 300 cycles >95%

Scaling resistance ASTM C-672:  
 50 cycles 0 rating

Rapid chloride permeability ASTM C-1202:  
 28 days 770 coulombs

TEST DATA at 75° F (23.9°C)

### Note:

The data shown is typical for controlled laboratory conditions. Reasonable variation from these results can be expected due to interlaboratory precision and bias. When testing the field mixed material, other factors such as variations in mixing, water content, temperature and curing conditions should be considered.

### Estimating Guide

Yield: 0.38 cu. ft./50 lb. (0.0107 cu. m/22.7 kg) bag

### Packaging

PRODUCT CODE	PACKAGE	SIZE	
		lbs.	kg
308246	Bag	50	22.67

### STORAGE

Shelf life of unopened bags, when stored in a dry facility, is 12 months. Excessive temperature differential and/or high humidity can shorten the shelf life expectancy. Store in a cool, dry area free of direct sunlight.

### Surface Preparation:

The concrete must be sound and free of all foreign material, including oil, grease, dust, laitance, or other surface contaminants. Surface preparation in accord with ICRI Guidelines is recommended. The edges of the patches should be saw-cut perpendicular to the surface to no more than a depth of 1/2 in. (13 mm) to avoid feather edging the repair material. Best results will be obtained by abrasive blasting the area to be repaired, providing uniform depth, a high surface profile and a firm bonding area. All surfaces to be repaired should be in a saturated-surface-dry (SSD) condition with no standing water on the surface. Supported repairs deeper than 2 in. (5.1 cm) may require reinforcement or anchorage. Please consult the engineer of record for the project for special requirements.

### Water Requirements:

Standard Mix: Add 7 pints (3.29 L) of clean potable water /50 lb. (22.7 kg) bag.  
 For improved performance and greater adhesion, use Dayton Superior Acrylic Bonding Agent J40 for part of the mix water.  
 Acrylic Admix: Add 7 pints (3.29 L) of Acrylic Bonding Agent J40 diluted 1:1 with clean potable water per 50 lb. (22.7kg) bag.

**TECHNICAL DATA SHEET****Mixing**

Mix with a low speed drill or, for larger projects, a mortar mixer. Add recommended amount of mixing liquid into the container followed by Perma Patch FP powder. Do not mix more than 3 minutes. Mix only enough material that can be placed within 40-minute period. Do Not Retemper.

**Placement:**

**Vertical:** Apply Perma Patch FP by pour or pump into a formed vertical surface. Care should be taken to confirm pump and hose diameters would accept material with pump manufacturer. Material can be placed neat to a minimum of ¼ in. (0.6 cm) up to a maximum thickness of 2 in. (5.1 cm) depth.

**Horizontal:** Using freshly mixed Perma Patch FP (do not dilute), scrub a thin layer into the SSD substrate with a stiff brush and place the Perma Patch FP before the scrub coat dries. Material can be placed neat to a minimum of ¼ in. (0.6 cm) up to a maximum depth of 2 in. (5.1 cm). Pour or pump material into curbed areas. **DO NOT FEATHER EDGE.** Extending for Volume Placement: For patches over 2 in. (5.1 cm) in depth add 30-60% by weight 15-30 lbs. (6.8-13.6 kg) clean, SSD, 3/8 in.(0.1 cm) pea gravel. Extension will depend on depth and finish desired. Placement of 6-50 lbs. (22.67 kg) bags is the maximum amount for any one application. for larger applications, contact Technical Services.

**CURING**

Perma Patch FP is self-curing under most conditions, however, to assure maximum durability under severe drying conditions (wind, high temperature, low humidity), water cure or use approved ASTM C-309 Dayton Superior water based curing compound.

**CLEAN UP**

Use water when material is wet. Hardened material requires abrasive methods.

**LIMITATIONS****FOR PROFESSIONAL USE ONLY**

When using less than one bag always dry mix the full bag prior to each use. Do not place at temperatures below 40°F(5°C) or if the temperature is expected to drop below 40°F(5°C) in the next 24 hours. In hot weather follow ACI Committee 305 recommended procedures. Colder temperatures will extend the setting time and warmer temperatures will reduce the setting time. Not for use as a parge coating or stucco type application. Mixing equipment should be cleaned with water frequently and prior to material hardening.

**PRECAUTIONS****READ SDS PRIOR TO USING PRODUCT**

- Product contains Crystalline Silica and Portland Cement – Avoid breathing dust – Silica may cause serious lung problems
- Use with adequate ventilation
- Wear protective clothing, gloves and eye protection (goggles, safety glasses and/or face shield)
- Keep out of the reach of children
- Do not take internally
- In case of ingestion, seek medical help immediately
- May cause skin irritation upon contact, especially prolonged or repeated. If skin contact occurs, wash immediately with soap and water and seek medical help as needed.
- If eye contact occurs, flush immediately with clean water and seek medical help as needed
- Dispose of waste material in accordance with federal, state and local requirements

**MANUFACTURER**

Dayton Superior Corporation  
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Technical Services: 877-266-7732  
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**TECHNICAL DATA SHEET****WARRANTY**

Dayton Superior Corporation ("Dayton") warrants for 12 months from the date of manufacture or for the duration of the published product shelf life, whichever is less, that at the time of shipment by Dayton, the product is free of manufacturing defects and conforms to Dayton's product properties in force on the date of acceptance by Dayton of the order. Dayton shall only be liable under this warranty if the product has been applied, used, and stored in accordance with Dayton's instructions, especially surface preparation and installation, in force on the date of acceptance by Dayton of the order. The purchaser must examine the product when received and promptly notify Dayton in writing of any non-conformity before the product is used and no later than 30 days after such non-conformity is first discovered. If Dayton, in its sole discretion, determines that the product breached the above warranty, it will, in its sole discretion, replace the non-conforming product, refund the purchase price or issue a credit in the amount of the purchase price. This is the sole and exclusive remedy for breach of this warranty. Only a Dayton officer is authorized to modify this warranty. The information in this data sheet supersedes all other sales information received by the customer during the sales process. THE FOREGOING WARRANTY SHALL BE EXCLUSIVE AND IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, AND ALL OTHER WARRANTIES OTHERWISE ARISING BY OPERATION OF LAW, COURSE OF DEALING, CUSTOM, TRADE OR OTHERWISE.

Dayton shall not be liable in contract or in tort (including, without limitation, negligence, strict liability or otherwise) for loss of sales, revenues or profits; cost of capital or funds; business interruption or cost of downtime, loss of use, damage to or loss of use of other property (real or personal); failure to realize expected savings; frustration of economic or business expectations; claims by third parties (other than for bodily injury), or economic losses of any kind; or for any special, incidental, indirect, consequential, punitive or exemplary damages arising in any way out of the performance of, or failure to perform, its obligations under any contract for sale of product, even if Dayton could foresee or has been advised of the possibility of such damages. The Parties expressly agree that these limitations on damages are allocations of risk constituting, in part, the consideration for this contract, and also that such limitations shall survive the determination of any court of competent jurisdiction that any remedy provided in these terms or available at law fails of its essential purpose.