

FASTSET™ REPAIR MORTAR

PRODUCT NO. 1247-23, -24 (CAN)

PRODUCT DESCRIPTION

High Performance Cement (HPC) FastSet™ Repair Mortar (No. 1247-24) is a polymer-modified and shrinkage-compensated rapid setting, high strength repair material designed for vertical and overhead structural repairs to concrete and masonry surfaces.

PRODUCT USE

HPC FastSet™ Repair Mortar demonstrates low sag, making it ideal for vertical or overhead repairs. This product can be built up to at least 38 mm (1-1/2 in) in one application. Its unique properties allow the user to actually sculpt the material during application. Use to repair concrete cracks, curbs, steps, pre-stressed panels, pipe, tunnels, sewers, loading docks, silos, retaining walls, culverts, catch basins, decorative moldings, bridge columns, parapet walls, septic tanks, cold storage vaults, virtually any vertical or overhead concrete surface.

SIZES

- 25 kg (55 lb) bags
- 9 kg (19.8 lb) pails

YIELD

- Each 25 kg (55 lb) bag of HPC FastSet™ Repair Mortar will yield approximately 14 L (0.50 ft³) of material.
- Each 9 kg (19.8 lb) pail of HPC FastSet™ Repair Mortar will yield approximately 5.0 L (0.18 ft³) of material.

TECHNICAL DATA

APPLICABLE STANDARDS

- ASTM C109 Standard Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 2 in or [50 mm] Cube Specimens)
- ASTM C157 Standard Test Method for Length Change of Hardened Hydraulic-Cement, Mortar, and Concrete
- ASTM C191 Standard Test Methods for Time of Setting of Hydraulic Cement by Vicat Needle
- ASTM C882 Standard Test Method for Bond Strength of Epoxy-Resin Systems Used with Concrete by Slant Shear
- ASTM C928 Standard Specification for Packaged, Dry, Rapid-Hardening Cementitious Materials for Concrete Repairs
- ICRI Guideline No. 310.2R Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings, Polymer Overlays, and Concrete Repair

DIVISION 3

03 01 00 Maintenance of Concrete
03 31 00 Structural Concrete



PHYSICAL/CHEMICAL PROPERTIES

Typical test results for HPC FastSet™ Repair Mortar, when tested in accordance with applicable ASTM Test Methods, are shown in Table 2. Product exceeds the requirements of ASTM C928 Type R2 with reduced flow for vertical and overhead applications.

INSTALLATION

SURFACE PREPARATION

All surfaces should be clean and free of foreign substances including corrosion present on reinforcing steel. Remove all spalled areas and areas of unsound concrete and previous patching materials. Holes should be chipped out to create a new sound substrate. The appropriate personal protective equipment should be worn. Large vertical or overhead patches deeper than 50 mm (2 in) should contain reinforcing steel. If none is present, new steel should be inserted using appropriate techniques. Preparation work done on the repair area should be completed by high pressure water blast, breaker hammer, or other appropriate mechanical means to obtain an exposed aggregate surface. Refer to current ICRI Guideline 310.2R for additional surface preparation information. Saturate repair area with clean water before patching to ensure SSD condition. No standing water should be left in the repair area or holes.

MIXING

Refer to Table 1 for water quantities. Begin by using a mid-range water quantity, then adjust, if needed, to achieve a placeable, gel-like consistency. The water demand of the product may vary based upon environmental conditions. Starting with the maximum quantity of water is not recommended. Add the water to the mixer or mixing container first, followed by the HPC FastSet™ Repair Mortar. Mix by hand, or mechanically using a standard mortar mixer, for a minimum of 3 minutes. Exceeding this consistency may cause a reduction in performance of the product. Where large quantities of material are needed for patches deeper than 50 mm (2 in) HPC FastSet™ Repair Mortar may be extended with up to 27.5 lb (12.4 kg) of -13 mm in (-1/2 in) aggregate per 25 kg (55 lb) bag or up to 4.5 kg (9.9 lb) per 9 kg (19.8 lb) pail. This may require a small adjustment of water depending on the dampness of the aggregate.

TABLE 1 TYPICAL WATER CONTENT

<u>Amount of Material</u>	<u>Minimum</u>	<u>Maximum</u>
9 kg (19.8 lb)	1.4 L	1.5 L
25 kg (55 lb)	3.9 L	4.1 L

APPLICATION

HPC FastSet™ Repair Mortar should be trowel applied to the damp surface. Apply a thin layer with heavy trowel pressure, and then go back and build up to the desired thickness. HPC FastSet™ Repair Mortar obtains high bond strength without the use of bonding adhesives or acrylic additives. After initial set, the material may be trimmed and shaped to match the existing contours of the patch area.

CURING

During the first 24 hours, it is best to keep the patch covered or damp to prevent excessive loss of water. Under hot, dry and windy placement conditions, all concrete tends to lose moisture unevenly and may develop plastic shrinkage cracks. The use of QUIKRETE® Acrylic Concrete Cure & Seal (No. 8730), plastic sheeting, or an application of a very fine fog spray of water avoids shrinkage cracking.

PRECAUTIONS

- Mix no more material than can be used in 15 minutes.
- In hot weather, use cool mixing water to lengthen setting time.
- Do not apply when temperatures are below 4 °C (40 °F) or are expected to drop below 0 °C (32 °F) within 24 hours.
- For best results, do not overwork the material or re-temper with additional water.

SAFETY

IMPORTANT: Read Safety Data Sheet carefully before using.

WEAR IMPERVIOUS GLOVES, such as nitrile, mask, and eye protection.

DANGER: Causes severe skin burns and serious eye damage. Prolonged or repeated inhalation of dust may cause lung damage or cancer.

KEEP OUT OF REACH OF CHILDREN

TABLE 2 TYPICAL PHYSICAL PROPERTIES

Setting Time, ASTM C191	
Initial	Approx. 20 minutes
Final	20 to 40 minutes
Consistency	Gel-like
Approximate Unit Weight	kg/m ³ (lb/ft ³) 2051 (128)
Compressive Strength, ASTM C109 (Modified)	
Age	MPa (PSI)
3 hours	13.8 (2000)
24 hours	27.6 (4000)
7 days	34.5 (5000)
28 days	41.4 (6000)
Slant Shear Bond Strength, ASTM C882	
Age	MPa (PSI)
24 hours	6.8 (1000)
7 days	10.3 (1500)
28 days	13.8 (2000)
Length Change, ASTM C157	
Age, Condition	
28 days, air	≥ -0.05%
28 days, water	≤ 0.05%

WARRANTY

NOTICE: Obtain the applicable **LIMITED WARRANTY** at www.quikrete.com/product-warranty Or send a written request to Quikrete Canada Holdings, Limited, Five Concourse Parkway, Atlanta, GA 30328, USA. © Quikrete International, Inc. Manufactured by or under the authority of Quikrete Canada Holdings, Limited © 2023 Quikrete International, Inc.