TECHNICAL DATA SHEET

RepCon® V/O

Single-Component Polymer-Modified Concrete Repair Mortar with Corrosion Inhibitor

DESCRIPTION

RepCon® V/O is a single-component, polymer-modified, fiber-reinforced concrete repair mortar with integral corrosion inhibitor for a variety of horizontal, vertical and overhead repair applications. RepCon® V/O incorporates the latest in polymer technology, offering superior durability, performance and ease of application in industrial, commercial and infrastructure (DOT) applications.

BENEFITS

- One-component, dry-polymer modified; just add water
- Dry-polymer technology and fiber reinforcement for excellent strength and freeze-thaw durability
- Hand-applied, or spray-applied for large projects
- Easy-to-apply/finish consistency up to 2" (51 mm)
- Concrete-gray color
- Designed for vertical and overhead repairs
- Contains integral corrosion inhibitor
- Complies with CDPH Standard Method V1.2 and USGBC LEED v4

APPLICATION

Surface Preparation: The concrete must be sound and free of all foreign material, including oil, grease, dust, laitance and other surface contaminants. For maximum durability, saw cut the perimeter of the repair 1/8" (3 mm) deeper than the depth of the repair, creating a notched, reinforced edge. Mechanically abrade the surface by an engineer-approved method in accordance with ICRI Guideline 310.2 to a minimum CSP 5. All surfaces to be repaired must be saturated surface-damp (SSD) with no standing water.

Priming/Scrub Coat: Thoroughly clean all exposed reinforcing steel of rust and coat with SpecPrep SB. Prepared concrete must be SSD and primed with a spray or brush coat of SpecPrep SB, with the repair mortar applied wet-on-wet or within the recommended open time (see the SpecPrep SB technical data sheet). Alternatively, apply a scrub coat of properly mixed repair mortar by scrubbing a thin layer into the pre-dampened substrate with a stiff brush, and place the repair mortar immediately, before the bond coat dries.

Mixing: Mix 6.25–6.75 pints (3.0–3.2 L) of clean water (depending on desired consistency) per 50 lb (22.7 kg) bag, using a low-speed drill. Add the water to the container first, then slowly add the RepCon® V/O powder. Mix 2–3 minutes. Mix only what can be applied within the setting period.

Placement: Trowel RepCon® V/O firmly into the prepared area, ensuring intimate contact with the bonding surface. Use slightly more material than needed and roughly shape it during placement. After the initial set, when RepCon® V/O is surface-hard, shave the material to the desired final shape with a steel trowel. Maximum depth of neat repair mortar is 2" (51 mm) per lift. Additional lifts can be placed after the previous lift has set; leave the previous lift with a rough surface to improve bond between lifts.

Finishing/Curing: Finish the repair to the desired texture to match the surrounding concrete. RepCon® V/O is self-curing under most conditions. In severe drying conditions, use an ASTM C309-compliant, water-based SpecChem curing compound.

TECHNICAL DATA INFORMATION

Set Time at 70 °F (ASTM C266)

Initial set ..... 50 min

Final set..... 90 min

Age	Compressive (C109)	Bond (C882)	Flexural (C348)
1 day	3,650 (25.2)	–	–
7 days	5,470 (37.7)	2,185 (15.1)	650 (4.5)
28 days	7,450 (51.4)	–	1,210 (8.3)

Values in psi (MPa).

Other Properties

Direct bond strength (C1583).....396 psi (2.7 MPa)

Split tensile strength (C496), 28 days..730 psi (5.0 MPa)

Length change (C157), wet/water cured, 28 days .....+0.01%

Length change (C157), air cured, 28 days .....−0.06%

Freeze-thaw (C666, Proc. A), durability factor at 28 days 95.8

Surface resistivity (AASHTO T358) ..... 59.8 kΩ·cm

Modulus of elasticity (C469) .....4.8 × 10^6 psi (33.1 GPa)

COMPLIANCE/STANDARDS

- ASTM C928 Rapid-Hardening Cementitious Mortar
- ASTM C109 Compressive Strength
- ASTM C882 Slant Shear Bond Strength
- CDPH Standard Method V1.2
- USGBC LEED v4

PACKAGING

50 lb (22.7 kg) bag; also available in a 50 lb (22.7 kg) plastic pail

Yield per 50 lb (22.7 kg) unit ..... 0.43 cu ft (12.2 L)

CLEANING

Tools and equipment may be cleaned with water before RepCon® V/O hardens.

SHELF LIFE

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

LIMITATIONS

Minimum thickness for vertical/overhead repairs in severe conditions is 1/8" (3 mm) for maximum durability. Do not retemper after initial mixing. Do not add other cements or additives. RepCon® V/O is fast setting, so clean mixing equipment with water as soon as possible. Use only potable water for mixing.

Do not allow repairs to freeze until the material has reached a minimum compressive strength of 1,000 psi (6.9 MPa). A minimum surface and ambient temperature of 45 °F (7 °C) and rising is required at the time of application. In adverse temperatures, follow ACI recommendations for hot/cold weather concreting. For optimum results, condition material to 65–85 °F (18–29 °C).

Caution: Contains portland cement and sand. Cement will cause irritation. Avoid contact. A dust respirator, safety goggles and rubber gloves are recommended. Avoid prolonged contact with clothing. In case of contact with eyes, immediately flush with water for at least 15 minutes and get prompt medical attention. Do not wear contact lenses when working with this product. DO NOT take internally. Keep out of reach of children.

Avoid hazards by following all precautions found in the Safety Data Sheet (SDS), product labels and technical literature. Please read this information prior to using the product.

WARRANTY

NOTICE – READ CAREFULLY

CONDITIONS OF SALE

SpecChem offers this product for sale subject to and limited by the warranty which may only be varied by written agreement of a duly authorized corporate

officer of SpecChem. No other representative of or for SpecChem is authorized to grant any warranty or to waive limitation of liability set forth below.

WARRANTY LIMITATION

SpecChem warrants this product to be free of manufacturing defects. If the product when purchased was defective and was within use period indicated on container or carton, when used, SpecChem will replace the defective product with new product without charge to the purchaser. SpecChem makes no other warranty, either expressed or implied, concerning this product. There is no warranty of merchantability. NO CLAIM OF ANY KIND SHALL BE GREATER THAN THE PURCHASE PRICE OF THE PRODUCT IN RESPECT OF WHICH DAMAGES ARE CLAIMED.

INHERENT RISK

Purchaser assumes all risk associated with the use or application of the product.

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