

## SEASHIELD 520™ PATCH REPAIR

### Fast Setting Vertical and Overhead Repair Mortar

#### Description

SeaShield 520 Patch Repair is a single component, Portland Cement based, polymer modified material designed to repair and rehabilitate vertical and overhead concrete and masonry surfaces without the need for costly form work. The fast setting, low shrinkage and high strength of SeaShield 520 Patch Repair allows it to be placed and sculpted to final shape in a single application up to 2" in (50 mm) thickness. SeaShield 520 Patch Repair meets ASTM C-928 for dry packaged rapid hardening cementitious materials for concrete repairs.

#### Uses

- Vertical and overhead repairs of concrete and masonry
- Fast repair of bridges, pilings and buildings
- Fill cracks and voids in curbs, steps and floors
- Rebuild cornices and ornate precast without forming
- Repairs of precast concrete panels and concrete pipes

#### Features

- High polymer modification provides tenacious bond
- Fast setting, 6-20 minute initial set
- Apply from featheredge up to 2" (50 mm) in single application
- Make repairs without costly forming
- Free of chloride, gypsum, and heavy metal
- Non-shrink
- Self-curing
- Freeze-thaw resistant
- Sulfate resistant
- Single component

#### Surface Prep

Surfaces to be repaired must be structurally sound, clean, and free of dust, dirt, oils, paints, and all other contaminants that will prevent proper bond. Remove all loose material and rust from corroded rebar by wire brushing, chipping, sandblasting or waterblasting. Clean surfaces to be treated by vacuuming, with compressed air or thoroughly brushing to remove small particles and dust. Prime all exposed metal and cleaned rebar with a slurry of SeaShield 520 Patch Repair. Mix slurry coat by adding SeaShield 520 Patch Repair to clean water to a batter- like consistency and brush coat all exposed surfaces to receive SeaShield 520 Patch Repair. Prior to application, all surfaces should be saturated, making sure there is no standing water remaining. Any acid-based cleaning solution must be neutralized before priming.



(con't →)

# PRODUCT DATA SHEET

## Mixing

Mix 5 parts SeaShield 520 Patch Repair to 1-part clean potable water (10 pounds material to 1 quart of water, 50 pounds to 5 quarts). Keep mix to a heavy, putty-like consistency. Mix only until completely blended and free of lumps. If using a drill mixer to blend material use a slow speed high torque drill at no more than 500-650 RPM. Add material to water in bucket or mortar mixer but add water to material if hand mixing smaller batches. Clean sharp sand or stone up to 3/8" may be added at a ratio of 1-part aggregate to 2 parts SeaShield 520 Patch Repair by weight. The addition of sand is recommended for all single application repairs over 3/4" in thickness. Do not mix more material than can be placed in 10 minutes. Do not retemper after initial mixing.

## Placement

Trowel on immediately. Vertical or overhead patches greater than 2" (50 mm) in depth may need to be built up in successive layers. If layering deep patches, scratch surface of each layer. Allow previous layer to tighten (5-10 minutes) before building another layer. Dampen first layer before applying second. Overfill patch and shave to shape. SeaShield 520 Patch Repair can be shaved with a trowel for up to 1 to 2 hours after initial set. Try to avoid overworking a patch. Finish with a damp sponge, brush, or steel trowel.

## Curing

During the first 24 hours, it is best to keep the patch covered or damp to prevent excessive loss of water. Portland Cement based finishes may be applied after only 30 minutes. For latex based paints wait at least 4 days, and for oil-based paints material should be allowed to cure for at least 14 days. Determined by a qualified professional engineer.

## Limitations

Product is temperature sensitive regarding set time; below 60°F (15°C) set is slower, above 80°F (26°C) set is faster. In hot weather, cool surface to be patched with cold water and use cold water for mixing. Do not apply SeaShield 520 Patch Repair when dry product or surface temperature is below 40°F (4°C). Dry product and surface can be warmed with a torch. Do not use "antifreeze" or set accelerator solutions. Do not add any concrete additives. Protect from precipitation for at least 4 hours.

(con't →)

# SeaShield 520™ Patch Repair

## PRODUCT DATA

### Compressive Strength (ASTM C-109)

|         |          |
|---------|----------|
| 1 Day   | 2675 psi |
| 7 Days  | 6810 psi |
| 28 Days | 7025 psi |

### Flexural Strength (ASTM C-348)

|         |          |
|---------|----------|
| 1 Day   | 575 psi  |
| 7 Days  | 1260 psi |
| 28 Days | 1680 psi |

### Tensile Strength (ASTM C-190)

|         |         |
|---------|---------|
| 1 Day   | 270 psi |
| 7 Days  | 465 psi |
| 28 Days | 520 psi |

### Shear Bond Strength (ASTM C-882)

|         |          |
|---------|----------|
| 7 Days  | 1140 psi |
| 28 Days | 1180 psi |

### Shrinkage (ASTM C-157)

|         |         |
|---------|---------|
| 28 Days | -0.045% |
|---------|---------|

### Freeze Thaw Resistance (ASTM C-666)

|            |           |
|------------|-----------|
| 250 Cycles | Excellent |
|------------|-----------|

### Gardner Impact

|         |                            |
|---------|----------------------------|
| 28 Days | Greater than 158 inch lbs. |
|---------|----------------------------|

### Entrained Air Content (ASTM C-231)

|     |      |
|-----|------|
| Wet | 5.3% |
|-----|------|

### Water Penetration (ASTM E-514)

|             |        |
|-------------|--------|
| 3 Days Soak | ½ inch |
|-------------|--------|

### pH

|     |    |
|-----|----|
| Wet | 12 |
|-----|----|

**STORAGE:** SeaShield 520 Patch Repair should be stored in a cool, dry interior area. At no time should material be exposed to high moisture, rain, or snow conditions. When stored in the original packaging and in proper storage conditions, the shelf life is one year from the date of manufacture.

**CLEANING:** Clean tools and equipment with MEK or equivalent solvent cleaner.

**HEALTH & SAFETY:** Wear protective clothing and ensure adequate ventilation. Avoid contact with skin and eyes. See Safety data sheet for further information.

**PACKAGING:** One pound of SeaShield 520 Patch Repair will yield approximately 17 cubic inches. One 50 pound unit will yield approximately 1/2 cubic foot.



## DENSO NORTH AMERICA

**HOUSTON:**  
9710 Telge Road,  
Houston, Texas,  
U.S.A. 77095  
Tel: 281-821-3355  
Fax: 281-821-0304

**TORONTO:**  
90 Ironside Crescent,  
Unit 12, Toronto,  
Ontario, Canada M1X1M3  
Tel: 416-291-3435  
Fax: 416-291-0898

[www.densona.com](http://www.densona.com)

*A Member of Winn & Coales International*

The information given on this sheet is intended as a general guide only and should not be used for specification purposes. We believe the information to be accurate and reliable but do not guarantee it. We assume no responsibility for the use of this information. Users must, by their own tests, determine the suitability of the products and information supplied by us for their own particular purposes. No patent liability can be assumed.