

SPECCRETE® PHAST PATCH D.O.T.

PHOSPHATE BASED PATCHING MORTAR FOR QUICK SETTING HIGHWAY REPAIRS

PRODUCT DESCRIPTION: *SPECCRETE® PHAST PATCH D.O.T.* is a one-component concrete repair and anchoring material that may be used in sub-freezing temperatures down to 0°F (-17.7°C). The quick setting characteristics make it an ideal product for bridge deck and highway overlays, precast spalling repairs, parking deck and ramp repairs, and a variety of heavy industrial repairs where fast setting, high early-strength properties are required. Also available in modified formulas for color and set time alteration.

BENEFITS:

- Meets ASTM C928 Type R3 Mortar Specifications
- Rapid Setting- May Be Used In Cold Freezing Weather
- Exceptional Bond Strength To Concrete And To Itself
- Will Bond To Damp Surfaces
- Non-Shrinking
- Requires Only Water For Mixing With No Wet Cure
- No Primer Or Bonders Required

LEED CREDIT CONSIDERATIONS: Materials and Resources: **MR Credits 5.2:** Regional materials- Greater than 20% extracted, processed & manufactured regionally at production location: Lemont, IL 60439. 90% Content- Harvested within 500 miles.

COMPOSITION: Magnesium-ammonium phosphates with selected aggregates.

WORKING & PERFORMANCE PROPERTIES @ 70° F (21° C) (APPROXIMATE):	
Yield per 50 lb. unit:	0.46 cubic feet*
Coverage per 50 lb. unit:	22 square feet at ¼ inch thickness
Initial Set per ASTM C-191:	10 Minutes
Final Set per ASTM C-191:	15 Minutes

*Adding 1 gallon of 3/8 inch pea gravel will increase yield to 0.51 ft³, 2 gallons will increase yield to 0.56 ft³

COMPRESSIVE STRENGTH PER ASTM C-109:	RESULTS:
1 hour:	2980 p.s.i.
3 hours:	4350 p.s.i.
1 day:	5610 p.s.i.
7 days:	6070 p.s.i.
28 days:	6480 p.s.i.

SLANT SHEAR BOND STRENGTH PER ASTM C-882:	RESULTS:
1 day:	1090 p.s.i.
28 days:	2050 p.s.i.

SCALING RESISTANCE TO DEICING SALTS PER ASTM C-672:	RESULTS:
25 cycles- Concrete-visual rating:	1.75 (2.50 max. allowed)
25 cycles- Mortar-scaled material:	0.31 lb./ sq. ft. (1.00 lb./sqft max. allowed)

AIR CURED LENGTH CHANGE % PER ASTM C-157:	
28 days:	- 0.052 (-0.150 max. allowable decrease)
WATER CURED LENGTH CHANGE %- ASTM C-157:	
28 days:	+ 0.003 (+0.15 max. allowable increase)

CHLORIDE ION CONTENT PER ASTM C1218:	10 ppm = 0.04 lb./yd ³ chloride ion
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*All tests above were run at 9.50 % water to powder ratio (4.75 lbs. water / 50.00 lbs. powder)

TECHNICAL DATA: *SPECCRETE® PHAST PATCH D.O.T.* Complies with ASTM C-928 Classification R3 Specifications for Packaged, Dry, Rapid Hardening Cementitious Materials.

DIRECTIONS FOR USE: SURFACE PREPARATION: All areas to be patched shall be clean and free of oil, grease, dirt, deteriorated concrete and all contaminants. Areas to be patched must be a minimum of 1/2" deep.

MIXING: *SPECCRETE® PHAST PATCH D.O.T.* will require 2.4 quarts of potable water per 50 lb. unit to achieve the proper mix consistency. Add the pre-measured amount of *SPECCRETE® PHAST PATCH D.O.T.* to the proper amount of clean water and mix for 2-3 minutes. Mix small quantities in a clean container with a hand trowel. Use a slow-speed motor and paddle mixer or a rotary drum mixer for mixing larger quantities. For deep fills, over 1.5", *SPECCRETE® PHAST PATCH D.O.T.* may be extended with up to 12.5 to 25.0 lbs. (1-2 gallon by loose volume) of clean, dry, 3/8" pea gravel per 50 lb. unit. Organization and timing are very important when mixing and placing *PHAST PATCH D.O.T.*

APPLICATION: Add the designated amount of water into the mixer, then add *SPECCRETE® PHAST PATCH D.O.T.* quickly mix to a smooth consistency and dump the material into place. Screed, trowel or broom finish quickly as *SPECCRETE® PHAST PATCH D.O.T.* achieves initial set in ten minutes. It is advised to clean equipment and tools with water between batches.

CAUTIONS: Do not mix more material than can be placed in 6-8 minutes. Use only potable water for mixing. When mixing *PHAST PATCH D.O.T.*, the water-to-powder ratio is very critical, do not vary the specified water amount. Do not over water. Do not feather edge. Do not apply less than 1/2 inch or over 1 1/2 inch in thickness per lift. Clean mixing equipment between batches. Protect from excessive sun, low humidity, rain and wind exposure, as well as temperature extremes that could prevent inadequate curing. Do not use *SPECCRETE® PHAST PATCH D.O.T.* for precision grouting or place against copper, aluminum or galvanized metal. When using *SPECCRETE® PHAST PATCH D.O.T.* indoors, provide adequate ventilation. The mixed product produces small amounts of ammonia and this odor will prevail during mixing and finishing DO NOT WET CURE. When the cured material is exposed to moisture, snow or rain, the ammonia odor may again be present for an extended period of time.

COLD WEATHER RECOMMENDATIONS: For temperatures below 32° F (0° C) use the minimum amount of water stated above (9.5% w/p or 2.3 quarts / 50 lb bag) for improved strength and set properties. In sub-freezing weather conditions, do not apply *SPECCRETE® PHAST PATCH D.O.T.* to frozen, frost, snow or ice filled surfaces. These should be thawed by use of ground heaters or propane torches if available. *SPECCRETE® PHAST PATCH D.O.T.* will generate its own heat in the early reaction process, so preheating the surface is not necessary if snow, ice or frost conditions are not visually present in the substrate. The use warm water and heated aggregates is also encouraged if possible for improved strength gain at early stages. Refer also to ACI 306.1 report "Standard Specification for Cold Weather Concreting" for recommended protection methods of concrete placement in sub-freezing temperatures. Colder temperatures will extend open time and reduce rate of strength gain. Do not add calcium chloride, bonding agents, or other admixtures to *SPECCRETE® PHAST PATCH D.O.T.* Colder temperatures will extend open time and reduce rate of strength gain. Do not add calcium chloride, bonding agents, or other admixtures to *SPECCRETE® PHAST PATCH D.O.T.* Use of any extension aggregates will alter physical properties as listed.

GHS HAZARD RATINGS: DANGER:



IRRITANT:
RESPIRATORY TRACT IRRITATION



HEALTH HAZARD:
KNOWN CARCINOGEN



HEALTH HAZARD:
CORROSIVE MATERIAL

WARNINGS: HEALTH HAZARD & IRRITANT: This product contains both Portland cement & crystalline silica (a known carcinogen). It is established that prolonged breathing of crystalline silica dust over time will increase the risk of serious lung disease (silicosis). Refer to product S.D.S. (Safety Data Sheet) for first aid information, or any related health and safety information before using this product. For medical emergencies only, call Infotrac at 800-535-5053.

FOR INDUSTRIAL USE ONLY. KEEP OUT OF REACH OF CHILDREN. Avoid Inhalation of these dusts and any prolonged, direct contact with skin. Wear chemical resistant gloves, safety goggles, and O.S.H.A. /N.I.O.S.H. approved respirator during mixing and placement. Keep away from food and drink. Wash hands thoroughly after use and before eating. Do not take internally.

NPCS HMIS SAFETY RATINGS: HEALTH = 2, FLAMMABILITY = 0, REACTIVITY = 0, PROTECTION = E

PACKAGING: 50# (22.70 kg) bags or pails

STORAGE: 40° to 90° F

SHELF LIFE: Bags -1 year / Pails- 2 years properly stored

FREIGHT CLASS DESCRIPTION: Item 42130, Sub 0, Freight Class 50, Cement Powder in bags /pails

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