

Advanced  
Construction  
Technologies

# Repair Concrete



## AP GEL PATCH

Polymer Modified, Cementitious, Vertical Or Overhead Patch/Repair

### Product Identifier

*Product Name*

AP GEL PATCH

*AP GEL PATCH is a polymer modified, cementitious patching material.*

### *Supplier Details*

Alchatek  
4508 Bibb Blvd  
Tucker, GA 30084  
T: (404) 618-0438

### *Emergency Phone Numbers*

Call CHEMTREC  
Day or Night

1-800-424-9300  
+1 703-527-3887

### Description

AP GEL PATCH is a polymer modified, cementitious patching material.

### Uses

- Structural repair of deteriorated concrete.
- For use on above or below grade structures.
- Can also be used on vertical or overhead surfaces.

### Advantages

- Superior adhesion.
- Polymer modified.
- Similar modulus of elasticity to concrete.
- Extremely low shrinkage.
- Vapor permeable.
- Resistant to freeze/thaw cycling.
- Easy to apply and finish.
- May be built up to 2 inches overhead in one application.
- Contains a corrosion inhibitor.
- Coatings may be applied after 72 hours.

### Application

- A. Surface Preparation: All surfaces must be clean and free of dirt, dust, paint, sealers, coatings, loose material, adhesives, curing compounds or any material that will inhibit patching material from coming in contact with the concrete pores. Tight, steel troweled concrete should be abraded or etched with sulfamic or muriatic acid solution, then neutralized to open up the concrete pores. Removal of any anti adherents or loose materials must be accomplished mechanically with a wire brush, chipping hammer, or by sand or water blasting. Solvents or strippers are not acceptable.

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- B. **Mixing:** For normal applications, add 1 gallon clean water to a clean container. Add 50# powder. Mixing can be achieved either manually or mechanically. Mechanical mixing is preferred for quantities greater than 1 bag. Mixing should continue until a uniform, lump-free consistency is obtained, small amounts of water may be added up to 12 ounces per bag. Avoid over mixing which could lead to over aeration of the mix.
- C. **Application:** Dampen the surface thoroughly with clean water to a saturated surface dry (SSD) condition. While the surface is damp, fill the desired area with Gel Patch to a maximum thickness of 2 inches. Alternatively, prime surface with UNIVERSAL POLYMER CONCENTRATE diluted one to one with water or an epoxy bonding agent. After rough leveling and consolidation, the product can be finished to desired texture. For applications greater than 2 inches in thickness, apply in successive lifts.
- D. **Curing:** The formulation of Gel Patch minimizes the need for curing. However, application in direct sunlight or in windy conditions may lead to rapid surface drying. The use of a curing compound that complies with ASTM C-309 or damp curing is recommended.
- E. **Limitations:** Ambient and surface temperatures must be 38 F. or above during application. Minimum thickness: 1/8 inch.  
Maximum thickness: 2 inches. Per lift.
- F. **Clean Up:** Remove uncured Gel Patch from tools and equipment with water. Cured material may only be removed mechanically.

## Packaging

AP GEL PATCH is supplied in 50 Pound Bags (22.7 Kilogram Bags)

## Coverage

50 pounds will yield approx. 0.40 cubic feet.

## Storage and Handling

- A. **Shelf Life:** 12 months in the original unopened container.
- B. **Storage:** Store in a dry area away from direct sunlight. The product should be conditioned to between 40°F and 95°F before use.

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## Health and Safety

- A. Health Precautions: This product contains Portland cement and crystalline free silica. Avoid breathing the dust. Exercise care, as with handling any chemical construction product.
- B. Safety Precautions: Use adequate ventilation. Use of a NIOSH/ MSA approved dust respirator, safety goggles and chemicals resistant gloves are strongly recommended. Remove contaminated clothing immediately.
- C. First Aid: Skin Contact: wash thoroughly with soap and water. Eye Contact: flush immediately with water and contact a physician. Respiratory Problems: remove affected person to fresh air immediately and contact a physician. Hygiene: wash hands immediately after use. Wash clothing before reuse.
- D. Spills: Collect in appropriate container. Uncured material may be removed with water.
- E. Disposal: Dispose of in accordance with local, state and federal regulations.
- F. Warning: KEEP CONTAINER CLOSED WHEN NOT IN USE. KEEP OUT OF REACH OF CHILDREN. NOT FOR INTERNAL CONSUMPTION. FOR INDUSTRIAL USE ONLY BY A QUALIFIED TECHNICIAN. Consult the Safety Data Sheet for further health and safety information. When in doubt contact Alchatek Technical Service.

## Technical Data

### COMPRESSIVE STRENGTH

ASTM C-109 Mortar (Mod.)	
1 day	3010 psi
7 days	4050 psi
28 days	7000 psi

### FLEXURAL STRENGTH

ASTM C-78	
1 day	400 psi
7 day	850 psi
28 day	1580 psi

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## SPLIT TENSILE STRENGTH

ASTM C-496	
28 day	1010 psi

## BOND STRENGTH

ASTM C-882 Modified	
1 day	500 psi
7 day	1200 psi
28 day	2000 psi

## SHRINKAGE (INCH/INCH)

ASTM C-596	
1 day	0.0009
7 day	0.0012
28 day	0.0012

## RAPID CHLORIDE PERMEABILITY

ASTM C-1202	
28 day	800

## MODULUS OF ELASTICITY IN COMPRESSION

ASTM C-4696	
28 day	1.9x10