

## Product Data

# POWER PATCH

## Fast-Setting Concrete Patching Material

### Application Benefits

- Rapid Setting
- Non-Shrink
- Shapeable
- Shaveable
- Resistant to Freeze Thaw
- Use in Thin to Thick Layers
- Tenacious Bond
- No Added Chlorides
- Light Color

POWER PATCH is a specially formulated, fast setting, cement-based concrete and masonry patching material that requires only the addition of potable water for mixing. POWER PATCH may be used for interior or exterior applications, as well as above or below grade on vertical, horizontal and overhead surfaces without forms. After the initial set, POWER PATCH may be shaved to the contours of the surrounding area. POWER PATCH is used to repair concrete pipes, manholes, sidewalks, driveways, ceilings, walls, curbs and panels and expressways.

✓ Initial Setting Time - 30-35 minutes

✓ Excellent trowelability and finishing

✓ Repairs Vertical, Horizontal and Overhead Surfaces Without Formwork

✓ Used For Applications Under Constant Moisture Contact

# APPLICATIONS

POWER PATCH is a specially formulated, fast-setting, cement-based concrete and masonry patching. When added with water, POWER PATCH repairs concrete pipes, manholes, sidewalks, driveways, ceilings, walls, curbs and panels and expressways.

POWER PATCH is easy to use. Simply add water to POWER PATCH and it sets up to a durable, smooth finish. POWER PATCH assists with costly repairs as well.

## DIRECTIONS

### DIRECTIONS FOR USE

**MIXING:** Mix only as much material as can be placed in 8-10 minutes. Always add the powder to the water. Mix POWER PATCH to a uniform, lump free consistency for a minimum of 60 seconds. A thick, creamy putty-like texture (zero slump) is considered ideal working consistency. It can be mixed with a margin trowel for small repairs.

**MIXING:** For bag mixing, place approx. 0.81 gallons (3.25 quarts) of water in the mixing container and slowly add the 45 lb of POWER PATCH while continuously mixing with a mechanical low speed drill and paddle mixer. Adjust water to the desired consistency of the mortar, but do not exceed 1.00 gallon (4.00 quarts) per 45 lb. bag. Larger quantities may be mixed in a mortar mixer if necessary to speed mixing process. Do not add previously mixed material to new batches, and do not re-temper or add additional water to previously mixed material to gain plasticity. In deep areas over 2" POWER PATCH should be extended with clean, washed 3/8" pea gravel in the range of 13 to 22.5 pounds (1.0-1.9 gallons) per 45 lb. bag. If adding dry pea gravel, additional water should be added at a rate of 0.4 gallon per gallon of aggregate. If adding "pre-wet" or damp gravel, then no additional water should be added. Aggregate addition should be in the following sequence with continuous mixing: Add water first, next add pea gravel, then add POWER PATCH.

**APPLICATION PROCEDURES:** Apply POWER PATCH between 1/4 inch minimum to 2 inch maximum thickness with no aggregate and 2 inches plus with aggregate. Always overfill the area to be patched. Force POWER PATCH into the area to be patched by trowel and trowel to the intended shape. Once initial set has occurred, shave the patch to the desired finish. Always shave towards the bond lines. Finish with a steel trowel. If applying in successive lifts, allow preceding lift to stiffen to harden before applying fresh material. Clean tools with water immediately after use.

**CURING:** Cure POWER PATCH with damp cure method if any surface treatment is to be used. Curing should be considered mandatory, especially in hot, windy weather, direct sunlight and for thin patches.

**APPLICATION CAUTIONS:** Set times will vary depending on temperature, humidity, and thickness. Minimum application thickness recommendation is 1/4 inch (6 mm). Do not feather edge. Maximum recommended application thickness in one lift is 2 inches (50 mm). Do not re-temper the mixed material. Do not overwork the completed surface. When mixing POWER PATCH, the water to powder ratio is very critical, do not vary the specified water amount or over water. Protect from excessive sun, low humidity, rain, or wind exposure, as well as temperature extremes that could prevent inadequate curing. Do not apply POWER

PATCH if the temperature is expected to fall below 40° F (4° C) or rise above 90° F (32.2° C) within 24 hours of application. Do not apply to frozen or frost filled surfaces. Heating the patch area until warm, using warm water for mixing and insulating the patch after application will assist in reaching higher strength development. Do not use direct heat on the patch after its installation. Colder temperatures will extend open time and reduce rate of strength gain. Do not add calcium chloride or other accelerator type admixtures to POWER PATCH.

**SURFACE PREPARATION: CONCRETE:** Existing concrete should be prepared by removing unsound concrete with the use of high pressure water blasting, grinding, sandblasting or by use of chemical cleaning and etching. Remove all dirt, grease, oil and other contaminants that may come in contact with the patching material. For horizontal patching, a 3/4 inch minimum saw cut is recommended to insure adhesion. Always pre-wet the substrate to a saturated surface dry (SSD) condition with no standing water on the surface.

## TECHNICAL DATA

**Composition:** Cement & selected aggregates

### WORKING AND PERFORMANCE PROPERTIES @ 70° F (21° C) APPROXIMATE VALUES\*

Initial set per ASTM C-191 (Finishing time):	30-35 minutes
Final set per ASTM C191:	40-45 minutes
Coverage per 45 lb bag:	21 square feet at 1/4 inch thickness
Yield per 45 lb bag:	0.44 cubic feet
Compressive Strength per ASTM C-109: 3 hour:	2630 ps.i.
Compressive Strength per ASTM C-109: 24 hour:	3710 ps.i.
Compressive Strength per ASTM C-109: 28 day:	7010 ps.i.
Flow of Mortar @15 Minutes per ASTM C-109	88%
Slant Shear Bond Strength per ASTM C- 882: 7 day:	1760 p.s.i.
Slant Shear Bond Strength per ASTM C- 882: 28 day:	5670 p.s.i.
Freeze Thaw Durability per ASTM C-666: 300 cycles:	97.92 %
Air-Cured Length Change per ASTM C-157: 28 day:	-0.050%
Water Cured Length Change per ASTM C-157: 28 day:	+0.031%
Scaling Resistance per ASTM C-672: 25 cycles:	0% Loss (Visual rating = 1 )
Chloride content per ASTM C1218:	90 p.p.m. = 0.38 lbs/lyd3 chloride ion

\*Above results obtained using a water / powder ratio of 16.22% = 0.87 gallon water (3.50 quarts) per 45 lb. (20.45 kg) unit