

SURF 'N PATCH

RAPID SET CONCRETE PATCHING MORTAR

DESCRIPTION: SURF 'N PATCH is a general purpose cement based patching mortar for concrete and masonry that requires only the addition of potable water for mixing. SURF 'N PATCH can be shaved to level the repair back to uniform condition and exhibits high compressive and bond strengths, along with good weathering properties. Typical uses are interior or exterior, above or below grade, on vertical, horizontal and overhead surfaces without forms. Common applications include repairs on concrete pipe, manholes, curbs, sidewalks, driveways, steps, walls, panels, ceilings, balconies, highway applications and related flatwork.

BENEFITS:

- ◆ **Ideal for vertical and overhead repairs**
- ◆ **Excellent trowelability and finishing**
- ◆ **28 day compressive strengths in excess of 7000 p.s.i.**
- ◆ **Light gray color for more uniform match to substrate**

COMPOSITION: Proprietary blend of cement, water reducers, rheology modifying additives and selected aggregates for improved finishing and trowelability. This product contains no calcium chloride or intentionally added chlorides that contribute to reinforcement steel corrosion.

TECHNICAL DATA:

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:	7 day:	5680 p.s.i.
Compressive Strength per ASTM C-109:	28 day:	7010 p.s.i.
Flow of Mortar @15 Minutes per ASTM C-109		88%
Slump per ASTM C-143		3.0
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 AASHTO T-260 Procedure C:		180 p.p.m. = 0.7 lbs/yd ³ 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

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.

MIXING: Mix only as much material as can be placed in 8-10 minutes. Always add the powder to the water. Mix SURF 'N 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.

For bag mixing, place approx. 0.81 gallons (3.25 quarts) of water in the mixing container and slowly add the 45 lb of SURF 'N 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" SURF 'N 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 SURF 'N PATCH.

APPLICATION: Apply SURF 'N 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 SURF 'N 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. Please contact us for conditions not specified or application procedures not noted.

CURING: Cure SURF 'N PATCH with a damp cure method if any surface treatment is to be used, or with a quality cure and seal compound. Curing should be considered mandatory, especially in hot, windy weather, direct sunlight and for thin patches.

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 the SURF 'N 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 SURF 'N 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 SURF 'N PATCH. The use PHAST PATCH is recommended for cold weather patching options.

WARNINGS: Contains cement and silica, avoid inhalation of dust. Wear gloves, safety goggles, and NIOSH/MSHA approved dust respirator during mixing and placement. Use only with adequate ventilation. Refer to product M.S.D.S. (Material Safety Data Sheet) for additional safety information. Do not take internally. Avoid prolonged contact with skin. FOR INDUSTRIAL USE ONLY. KEEP OUT OF REACH OF CHILDREN. If inhalation or exposure causes any physical discomfort or irritation that persists, SEEK MEDICAL ATTENTION. For medical emergencies only, call Infotrac 800-535-5053

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

PACKAGING: 45 lb. bag or pail (20.45 kg), 50 bags / pallet, or 36 pails / pallet

STORAGE: Store in a dry, protected place

SHELF LIFE: 1 year properly stored **FREIGHT CLASS:** Class 50