

Advanced
Construction
Technologies

Repair Cracks



AP FAST REPAIR 850

Two Component Polyurethane System

Product Identifier

Product Name

AP FAST REPAIR 850

AP FAST REPAIR 850 is a zero VOC, two-component polyurethane system. The high quality thermoset is designed for fast repair of concrete (spalls, cracks, etc.).

Supplier Details

Alchatek
4508 Bibb Blvd
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Emergency Phone Numbers

Call CHEMTREC
Day or Night

1-800-424-9300
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Description

AP FAST REPAIR 850 is a zero VOC, two-component polyurethane system. The high quality thermoset is designed for fast repair of concrete (spalls, cracks, etc.). Low viscosity allows for maximum penetration into cracks and porous concrete. AP FAST REPAIR 850 can be mixed with up to equal parts oven dry silica sand to increase product yield and compressive strength.

Uses

- Horizontal spall repairs
- Horizontal crack repairs
- Cold storage repairs
- Flooring pinhole patching
- Concrete road repair

Advantages

- Extremely fast cure time
- High compressive strength
- Low viscosity
- Low temperature cure
- Suitable for DOT work

Application

Note: the following are a few typical application procedures. In case of other jobsite parameters, please contact our technical department.

PRELIMINARY ANALYSIS

Inspect substrates and identify all areas to be repaired. Clearly notate areas to be repaired and areas not to be repaired prior to starting work.

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TWO COMPONENT POLYURETHANE SYSTEM

PREPARATION OF THE SUBSTRATE

Pressure wash or blow out entire repair substrate with oil free compressed air to remove all contaminations, loose debris, or existing coatings.

PREPARATION OF THE PRODUCT

Premix B component using a low-speed drill with a paddle mixer ensuring not to whip air into the product. If using cartridges, shake by hand.

PREPARATION OF THE EQUIPMENT

For bulk applications, use Alchatek Joint Filling Machine (see technical data sheet for instruction). For cartridge applications, use Alchatek (10.6 fl oz x 10.6 fl oz [300ml x 300ml]) dual cartridge manual gun.

APPLICATION

- Sawcut and remove spalled concrete in 90-degree angles to the damaged concrete outer limits. Sawcut to a minimum depth of 1" (25mm). In areas that are damaged below 1" depth, remove concrete until solid substrate is exposed.
- Remove all loose debris and dust via vacuum or oil-free compressed air.
- If water-assisted saws were used, wait for substrate to dry or apply heat to expedite drying. Only apply AP FAST REPAIR 850 to dry substrates.
- OPTIONAL: Add oven dry silica sand or aggregate to mixed product to increase compressive strength and yield.
- Use hand-held grinder with ZEC wheel to create flush finish when tack free.

REQUIRED TOOLS

- 10 Gallon Units: AP Joint Fill Machine
- Cartridges: 300x300 cartridge gun
- Air compressor with oil separator
- Concrete grinder with ZEC wheel

CLEANING AND MAINTENANCE

Disconnect A and B hoses from AP Joint Fill Machine after application. Pump excess material into pails tightly capping, sealing and saving for later use. Proceed to flush the AP Joint Fill Machine with AP Flush 121. Pump AP Flush 121 through hoses until clean flush is coming out, then recirculate back into A and B hoppers for 3 to 4 minutes. Do not mix A and B side AP Flush 121. Grease the gun at the gun grease zerk fittings. Pour 1 quart of motor oil into each empty hopper for storage.

COMPLIMENTARY PRODUCTS

Oven dry silica sand, hammer, chisel.

ADVICE / FOCAL POINTS

When adding oven dry silica sand, be sure to mix quickly and apply product prior to reaction. Take clear note of working times. Reaction times will be faster in hot conditions.

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LIMITATIONS

Cured color is not UV stable. Not suitable for vertical or overhead applications.

Technical Data

Physical Properties - Cured

AP FAST REPAIR 850	PART A	PART B	MIXED
Mix Ratio, pbv	1	1	
Specific Gravity	1.04	1.09	1.065
Appearance	Liquid	Liquid	Solid
Color	Grey	Dark Amber	Grey
Density	8.9 lb/gal (1066.5 kg/m ³)	10.3 lb/gal (1234.2 kg/m ³)	9.6 lb/gal (1150.3 kg/m ³)
Viscosity	460	200	300

Properties will vary depending on application conditions.

Estimating Quantities

AP FAST REPAIR 850 occupies 231 cubic inches per gallon. Estimate 10% excess for overfill and waste. If mixing oven dry silica sand, account for addition of volume from silica sand in sample cup test. (Note: Volume of dry silica sand does not directly equal increased volume in mixed product. Some sand is cured in solution.)

Mixed Volume with Oven Dry Silica Sand

Resin	Mix Ratio	Sand	Mixed Volume
1 gal (3.79 liters)	1:1	1 gal (13 lbs)	1.6 gal (6.06 liters)
1 gal (3.79 liters)	1:2	2 gal (26 lbs)	2.2 gal (8.33 liters)
1 gal (3.79 liters)	1:3	3 gal (39 lbs)	2.8 gal (10.6 liters)

Packaging

- 10 Gallon (37.85 Liter) Units
- 325 x 325 ml (10.99 x 10.99 fl oz) Cartridges / Case of 12

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Storage and Shelf Life

This product has 6-month shelf life if stored in a dry warm place at 60-80° F (15.56-26.67°C) in original sealed containers. Lower temperature (below 60° F [below 15.56°C]) may cause a partial crystallization of the resin. If crystallization has occurred, heat the resin in its original container placing it into another container with hot water. Change water to keep it hot for a few hours. Cool down to 77° F (25°C). If viscosity of the resin is still higher than specified, repeat the procedure.

Safety Precautions

Avoid contact with eyes and skin, always use personal protective equipment in compliance with local regulations. Read the relevant Safety Data Sheet before use. Safety Data Sheets are available on Alchatek.com. When in doubt contact Alchatek Technical Service.