DESCRIPTION

Premera PolyPatch CB Epoxy Repair Paste is a two-component, moisture insensitive, high modulus, high strength, structural epoxy paste adhesive available in cartridge and bulk systems. Its specially formulated non-sag properties are perfect for large overhead and vertical repairs. It may be used in temperatures between 40 °F and 110 °F (4 °C and 43 °C).

FEATURES

- High-build and easily trowel-able
- Hi-mod formula cures stronger than concrete
- Superior hardness for tamper resistance
- Excellent adhesion to concrete, masonry, metals, wood, and most structural materials.
- Paste consistency ideal for vertical and overhead repair of concrete.
- Fast-setting and strength-producing adhesive. Thixotropic: non-sag in vertical and overhead applications
- No primer needed
- Moisture tolerant
- Epoxy mortar for interior and exterior use
- Available in cartridges and bulk units
- Easy mix formula in a 1:1 ratio by volume
- Different colored components (for mixing control)
- Approved for ASTM C881-15, AASHTO M235. Type I, II, IV & V Grade 3 Class B & C (Approved for Class B at temperatures ≥ 55 °F (13 °C))
- Suitable for potable water contact, meets NSF/ANSI Standard 61.

TYPICAL USES

- Pick-proof sealant in schools, prisons, hospitals and other security applications, around windows, doors, lock-ups etc. inside correctional facilities.
- General adhesive/filler for overhead and vertical repairs
- Ideal as a bonding agent for building materials including, concrete, block, stone, steel and other substrates
- Capping paste and injection port adhesive for pressure injection
- High-build, non-sag patching material for non-moving cracks and spalls
- Structural bonding of concrete, masonry, metals, wood, etc. to a maximum glue line of 1⁄8 in. (3 mm).
- Grout bolts, dowels, and pins.

COLORS

Part A (Resin): White, Part B (Hardener): Dark Gray, Mixed: Light Gray.

PACKAGING

22 oz. (651 ml) cartridges. 12 Cartridges per case.

10-gallon kits. 24 kits per pallet. (12 – 5 gallon pails of part A & 12 – 5 gallon pails of part B)
4-gallon kits. 24 kits per pallet. (12 – 2 gallon pails of part A & 12 – 2 gallon pails of part B)

COVERAGE

Calculation for theoretical coverage: 40 Ft2 /gal @ 40 mils on smooth nonporous substrate.

1 gal. yields 231 cu. in. (3,785 cm3) of epoxy paste adhesive. 1 gal. (3.8 L) mixed with 1 gal. (3.8 L) by loose volume of oven-dried aggregate yields approximately 346 cu. in. (5,670 cm3) of epoxy mortar.

Note: The experienced job estimator will allow up to 50% contraction on small jobs and down to 15% for larger jobs.

STORAGE

Twenty-four months in factory delivered, unopened containers. Keep away from extreme heat, freezing, and moisture. Store at temperatures between 40 °F and 90 °F (4 °C and 32 °C).

MIXING

There is no need for mixing or diluting.

TECHNICAL DATA (All values @ 77 ºF / 25 ºC)	**US**	**Metric**
Solids by volume (ASTM D2697)	100%	100%
Volatile organic compounds (EPA CFR 40, Part 60)	0.19 lb./gal	23.14 gm/ lit
Theoretical coverage	40 ft^2/gal @ 40 mils	1m^2/ lit @ 1mm
Specific gravity of materials (ASTM D792)	A: 9.18, B: 15.7 lbs./gal	A: 1.19, B: 1.89 kg/ liter
Viscosity at 77 ºF/25 ºC (ASTM C881)	Non-sag	Non-sag
Shelf life @ 77 ºF /25 ºC	24 Months	24 Months
Compressive yield strength (ASTM D695) - 7 days	13,850 psi	95.5 MPa
Compressive modulus (ASTM D695) - 7 days	743,300 psi	5,125 MPa
Tensile strength (ASTM D638)	3,600 psi	25 MPa
Tensile elongation (ASTM D638)	0.4 %	0.4 %
Hardness (ASTM D2240)	85 Shore D	85 Shore D
Bond strength. Hardened to hardened concrete (ASTM C882) – 2 days	2,180 psi	15 MPa

Bond strength. Hardened to hardened concrete (ASTM C882) – 14 days	2,630 psi	18.1 MPa
Bond strength. Fresh to hardened concrete (ASTM C882) – 14 days	1,960 psi	13.5 MPa
Bond strength. Fresh concrete to steel (ASTM C882) – 14 days	1,890 psi	13 MPa
Heat deflection temperature (ASTM D648) – 7 days	138 °F	59 °C
Water absorption -14 days (ASTM D570)	0.23 %	0.23 %
Linear coefficient of shrinkage (ASTM D2566)	0.0007 %	0.0007 %
PROCESSING PROPERTIES (Under standard lab conditions)		
Mix Ratio V/V	1:1	
Gel time	68 minutes	
Pot life	21 minutes	
Tack free time	2-3 hours	
Full cure time	24 hours	
Properties and values are highly dependent on equipment, spray gun, mix chamber temperature, pressure and related parameters. Variations are possible and expected. Values included above are per NCSI standard lab practices & methodology at various dry film thicknesses.		

SURFACE PREPARATION

Concrete:
Old concrete must be clean and profiled or textured. Remove all dirt, oil, debris, wax grease or dust. New concrete should be a minimum of 21 days old. Prepare the surface by rough-grinding, scarifying, bush hammering or by using other equipment that will give a roughened profile. A roughened surface is imperative for good adhesion. Always be sure the bonding surfaces are prepared in advance before mixing product. Mix only enough material that can be used within the workable time or pot life. When bonding two surfaces together, make sure to completely fill all the gaps between the mating surfaces.

Metal:
All surfaces should be clean and free from contamination. The surface should be assessed and treated in accordance with ISO 8504, Abrasive blast the surface to minimum NACE-2/SSPC SP-10/Sa 2.5, as per ISO 8501-1, for a visual assessment of surface cleanliness with an anchor profile of 3 to 4 mils (75 -100 microns). Soluble salts must be removed to an acceptable levels. ***Refer to NCSI surface preparation manual for detailed procedures for different types of substrates.***

APPLICATION:

Installation Instructions are available within this Technical Data Sheet (TDS). Due to occasional updates and revisions, always verify that you are using the most current version of the Installation Instruction. In order to achieve maximum results, proper installation is imperative.

CARTRIDGE PREPARATION:

When the work environment or substrate falls below 70 °F (21 °C) condition the product to 70 - 75 °F (21 - 24 °C) prior to use. Cold product may become too thick. Product that is too warm will react much faster than normal.

1. Check the expiration date on the cartridge to ensure it is not expired. Do not use expired product! Remove the protective cap from the adhesive cartridge and insert the cartridge into the recommended dispensing tool. Before attaching mixing nozzle, balance the cartridge by dispensing a small amount of material until both components are flowing evenly. For a cleaner environment, hand mix the two components and allow waste to cure prior to disposal in accordance with local regulations.

2. After the cartridge has been balanced, confirm the internal mixing element is in place and screw on the proper Adhesives Technology mixing nozzle to the cartridge. Do not modify mixing nozzle prior to dispensing adhesive.

3. Dispense the initial amount of material from the mixing nozzle into a disposable container according to local regulations. The product should be a uniform light gray color with no streaks. NOTE: The adhesive must be properly mixed in order to perform as published. CAUTION: When changing cartridges, never re-use nozzles. A new nozzle should be used with each new cartridge and steps 1 - 3 should be repeated accordingly.

BULK MIXING INSTRUCTIONS:

When the work environment or substrate falls below 70 °F (21 °C) condition the product to 70 - 75 °F (21 - 24 °C) prior to use. Thoroughly stir Part B with a Jiffy mixing paddle or similar before mixing Parts A and B together. NOTE: Cold product may become too thick. Product that is too warm will react much faster than normal.

1. Place the total contents of Part “B” (hardener) into the Part “A” pail (resin) OR proportion equal parts by volume of both Part “A” and Part “B” into a clean pail. Be sure that the components are mixed at an exact 1:1 ratio by volume.
2. Mix thoroughly with a low speed drill (400-600 rpm) with a jiffy mixing paddle or similar. Carefully scrape the sides and the bottom of the container while mixing. Keep the paddle below the surface of the material to avoid entrapping air. Proper mixing will take at least 3 minutes and when well mixed the material will be ree of streaks or lumps.
3. Mix only the amount of material that can be used before the pot life expires.

SPALL REPAIR PREPARATION:

Cut into the sound concrete using a grinder with a diamond blade or tuck point diamond grinding wheel and prepare the area to be repaired as noted above under Surface Preparation. Place the mixed neat PolyPatch CB into the repair area and smooth out with a trowel to create a smooth surface.

CAPPING PORTS FOR STRUCTURAL CRACK REPAIR:

1. Place and secure injection ports, or port bases, with the Premera PolyPatch CB taking care not to leave any pinholes, noting that the port spacing should be approximately 6 - 12 in. (152 – 305 mm) apart. NOTE: Do not allow the epoxy to block the passage between the port and the crack face.
2. Place additional Premera PolyPatch CB between the ports making sure the entire crack is sealed off anywhere it is visible and accessible and make sure the ports are securely fastened to the concrete so they will not leak when injected under pressure.
3. Allow the Premera PolyPatch CB to cure a minimum of 4 hours at 75 °F (24 °C) before injecting the crack with an crack injection adhesive.

PICK-PROOF SEALANT:

Surface or void must be clean and sound prior to application. Remove all dirt, oil, debris, grease, loose paint or dust. Use sandpaper or a wire brush to roughen any smooth bonding surface. Apply an applicable size bead of material around the area to be sealed. A rounded edge spatula should be used for tooling when used in cracks or joints. For filling voids, dispense into deepest area first filling from the back to front until entire void is filled. In thinner cracks it may be necessary to use an additional flat mixing tool such as a putty knife to aid in working the adhesive deeper into the area to be repaired.

EQUIPMENT CLEAN UP

Always wear appropriate protective equipment such as safety glasses and gloves. Clean uncured materials from tools and equipment with mild solvent. Cured material can only be removed mechanically.

LIMITATIONS

- Do not thin with solvents, as this will prevent cure
- New concrete should be a minimum of 21 days old
- Not intended for repairing cracks subject to movement; repairs should be made to the cracked element to eliminate the cause of the cracking prior to usage
- Maximum epoxy mortar thickness is 4 in. (100 mm) per lift.
- Not for sealing cracks under hydrostatic pressure.
- Not an aesthetic product. Color may alter due to variations in lighting and/or UV exposure.

WARRANTIES AND DISCLAIMERS

Nukote Coating Systems International, a Nevada, USA Corporation warrants that this product shall conform to the technical specifications published in the product literature. The quality and fitness of the product is dependent upon the proper mixture and application of the components by the applicator. Nukote Coating Systems has no role in the application of the finished polymer other than to manufacture and supply its two components. It is vital that the person applying this product understands the product and is fully trained and certified in the use of plural component equipment and application of plural component materials. There are no warranties that extend beyond the description

on the face of this instrument, except when provided in writing, directly by Nukote Coating Systems International and executed under seal by a company officer.