

CB420E ACRYLIC STRUCTURAL ADHESIVE



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PRODUCT DESCRIPTION

CB420E acrylic structural adhesive is a two-part methacrylate adhesive designed for structural bonding of thermoplastic, metal, and composite assemblies. CB420E adhesive provides high strength, excellent fatigue endurance, outstanding impact resistance, and superior toughness, and is recommended for bonding Click Bond adhesive bonded fasteners.

PRODUCT FEATURES

- Fast cure: cures quickly at room temperature.
- Chemical resistance: excellent resistance to Hydrocarbons, Acids and Bases (3-10 pH), and salt solutions. Note: susceptible to polar solvents and strong acids and bases.
- Strength: provides high strength, excellent fatigue endurance, outstanding impact resistance, and superior toughness.
- Versatile: recommended for bonding ABS, Acrylics, Aluminum*, FRP, PVC, carbon steel*, and stainless steel* substrates (* recommend primer).
- Service Temperature Range: -67°F to 250°F (-55°C to 121°C)

UNCURED PROPERTIES

Color: Part A: blue liquid
Part B: off-white paste
Cure time at 75°F (24°C): 15-18 minutes (75% of ultimate strength)
24 hours (full cure)
Mix Ratio (B:A): 10:1 (volume), 8.9:1 (weight) Working time at 75°F (24°C): 4-6 minutes (small quantities).

TYPICAL CURED PROPERTIES

Shear Strength (ASTM D1002)	Peel Strength (ASTM D1876)
3050 psi (21.0 MPa)	28 pli (4.9 kN/m)

Lap Shear testing performed at room temp. using .063 inch thick 2024-T3 aluminum adherends. T-Peel testing performed at room temp. using .020 inch thick 2024-T3 aluminum adherends.

STORAGE AND SHELF LIFE

CB420E adhesive should be stored between 55°F (13°C) and 75°F (24°C) in a dry place when not used for a long period of time. CB420E adhesive has a minimum shelf life of 9 months when stored in the original package between 55°F (13°C) and 75°F (24°C). Long term exposure to temperatures above 75°F (24°C) will reduce the shelf life. Temperatures above 100°F (56°C) quickly diminish CB420E adhesive reactivity and should be avoided. CB420E adhesive should be refrigerated [45-55°F (7-13°C)] whenever practical. CB420E adhesive should never be frozen.

SURFACE PREPARATION

Surface preparation is an important part of adhesive bonding. Lightly abrade glossy surfaces to improve the adhesive bond strength. Just prior to adhesive application, clean surfaces with solvent using clean rags or paper towels. Do not use shop towels, rags, or paper wipes contaminated with oil, soap, or reclaimed solvents. Wash one small area at a time, then dry with a clean cloth before the solvent evaporates to prevent redeposition of contaminants. To maintain a clean solvent supply, always pour the solvent onto the washing cloth.

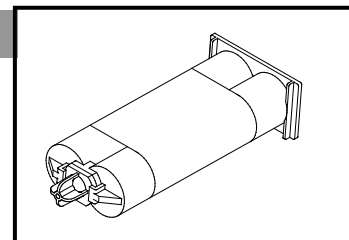
MIXING AND APPLYING ADHESIVE

Dispense 10 parts of component B and one part of component A (by volume). Mix thoroughly or use a disposable mixing nozzle. Apply mixed adhesive to one of the surfaces to be bonded. To assure maximum bond strength, surfaces must be mated within 4 minutes. Use sufficient material to ensure 100% joint fill when parts are mated. All adhesive application, part positioning, and clamping should occur before the 4-6 minute adhesive working time has expired. Ensure that the assembly remains undisturbed for a minimum of 18 minutes at 75°F (24°C) to allow the adhesive cure to achieve handling strength at which point the fixtures or clamps may be removed. Application of CB420E adhesive at temperatures between 65°F (18°C) and 80°F (27°C) will ensure proper cure. Temperatures below 65°F (18°C) will slow cure speed; above 80°F (27°C) will increase cure speed.

CB420-50E ADHESIVE PACKAGING

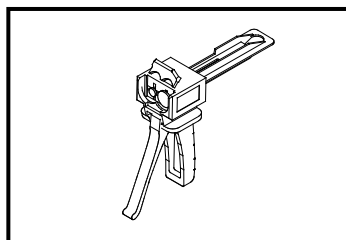
Standard 35 ml (1.18 ounce) dual pack syringe cartridges improve efficiency by reducing installation time. Click Bond® dispensing tools with static mixing tips provide quick and accurate mixing and application of CB420E adhesive.

CB420E adhesive is also available in a 10 ml dual pack syringe (CB420-10E).

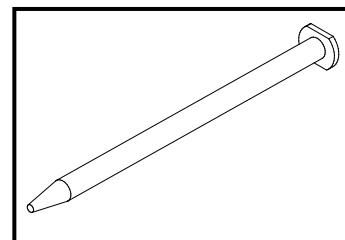


DISPENSING TOOLS AND MIXING TIPS FOR CB420-50E ADHESIVE

CB100-81 MANUAL DISPENSER



CB106 MIXING TIP



DIRECTIONS FOR DISPENSING CB420-50E 35 ml CARTRIDGES

1. Place cartridge into retaining lip on CB100-81 hand actuated tool.
2. Remove end cap by turning counterclockwise.
3. Activate the tool slightly to extrude a small amount of adhesive onto scrap material to ensure adequate flow of both components.
4. Attach the mixing tip.
5. Dispense a small line of adhesive onto scrap material to ensure adequate mixing.
6. Apply adhesive to part, joint surfaces, and hold under pressure for 18 minutes minimum at 75°F (24°C).
7. When not in use, remove and dispose of tip and replace endcap to preserve remaining adhesive.

IMPORTANT PRODUCT PERFORMANCE AND CAUTIONARY INFORMATION

A NIOSH approved air-purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection. Avoid prolonged breathing of vapors that may cause respiratory irritation.

CB420E adhesive (Part B) is flammable. Contents include methacrylate esters. Keep containers closed after use. Wear gloves and safety glasses to avoid skin and eye contact. Wash with soap and water after skin contact. In case of eye contact, flush with water for 15 minutes and get medical attention. Harmful if swallowed. Keep out of reach of children. Keep away from heat, sparks, and open flames. A large amount of heat may be generated when large masses of material are mixed at one time. Further, the heat generated by the exotherm resulting from the mixing of large masses of this adhesive can result in the release of entrapped air, steam, and volatile gases. To prevent this, dispense only enough material as needed for the application and for use within the working time of the product and confine gap thickness to no more than its maximum gap fill capability (.375 inch).

For industrial use only. For complete cautionary information refer to the Safety Data Sheet (SDS). Copies are available from the Click Bond Customer Service Department upon request.

Values stated in this bulletin represent typical values as not all tests are run on each lot of material produced. For formalized product specification for specific product end uses, contact the Customer Service Department. Information provided herein is based upon tests believed to be reliable. Inasmuch as Click Bond has no control over the exact manner in which others may use this information, it does not guarantee the results to be obtained. Nor does Click Bond make any express or implied warranty of merchantability, or fitness for a particular purpose concerning the effects or results of such use.

ORDERING AND FURTHER TECHNICAL INFORMATION

Contact the Click Bond Customer Service Department:

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