

CB420 ACRYLIC STRUCTURAL ADHESIVE



CB420E ACRYLIC STRUCTURAL ADHESIVE

PRODUCT DESCRIPTION

CB420 acrylic structural adhesive is a two-part methacrylate adhesive designed for structural bonding of thermoplastic, metal, and composite assemblies. CB420 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

- CB420-50 is the standard version of the acrylic adhesive intended for U.S. and other non-European markets.
- CB420-50E is a REACH compliant version of CB420 adhesive developed for the European market.
- 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: -40°F to 250°F (-40°C to 121°C)

UNCURED PROPERTIES

Color: Part A: off-white liquid (CB420-50) Part A: blue liquid (CB420-50E) Part B: off-white paste
Mix Ratio (B:A): 10:1 (volume), 8.9:1 (weight)

Cure time at 75°F (24°C): 15-18 minutes (75% of ultimate strength)
24 hours (full cure)

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

CB420 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. CB420 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 CB420 adhesive reactivity and should be avoided. Shelf life may be extended by refrigeration [45°F - 55°F (7°C - 13°C)]. CB420 adhesive should never be frozen.

SURFACE PREPARATION

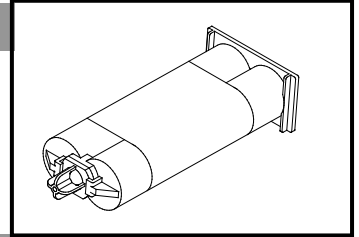
Surface preparation is an important part of adhesive bonding. Lightly abrade glossy surfaces to improve the adhesive bond strength. Just prior to adhesive application, clean surfaces with solvent using clean rags or paper towels. Do not use shop towels, rags, or paper wipes contaminated with oil, soap, 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 CB420 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.

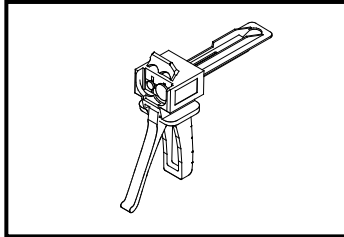
CB420-50 AND CB420-50E ADHESIVE PACKAGING

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 CB420 adhesive.

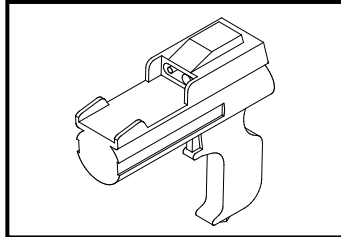


DISPENSING TOOLS AND MIXING TIPS FOR CB420-50 AND CB420-50E ADHESIVE

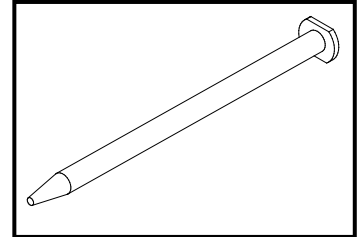
CB100-81 MANUAL DISPENSER



CB112 PNEUMATIC DISPENSER



CB106 MIXING TIP



DIRECTIONS FOR DISPENSING CB420-50 AND CB420-50E 35 ml CARTRIDGES

1. Place cartridge into retaining lip on CB112 air powered tool or 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, join 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.

CB420 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 Material Safety Data Sheet (MSDS). 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:

Click Bond, Inc. 2151 Lockheed Way Carson City, NV 89706-0713 Phone: 775-885-8000 Fax: 775-883-0191