

**BD7005 Low Surface Energy Plastic Bonding Structural
Adhesive**

1. DESCRIPTION

BD7005 is a two-part 1:1 mix ratio methacrylate, short open time structural adhesive specifically formulated for bonding low surface energy plastics such as polyethylene and polypropylene. BD7005 features a 5 minute open time for rapid assembly. BD7005 comes preblended with 10mil glass beads to ensure a consistent bond-line in applications.

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2. CHARACTERISTICS:

Room Temperature Cure

- Working Time
- Fixture Time
- Can be Moved In
- Dispensing Temp.
- Flash Point

Properties

4 to 6 minutes (at 75°F/ 24°C)
60 to 90 minutes (at 75°F/ 24°C)
90 minutes
65°F to 85°F (18°C to 30°C)
51°F (11°C) – See SDS for more safety information

3. PHYSICAL PROPERTIES:

Uncured:

- Viscosity(cps)
- Color
- Mix Ratio (wt or vol)

Resin

100,000 – 200,000
Natural
1.0

Activator

70,000 to 150,000
Amber to off white
1.0

4. MECHANICAL PROPERTIES:

Shear Strength

- Strength, psi

Substrate

HDPE

Results

>1000

Failure Type

Cohesive

5. HANDLING AND APPLICATION:

BD7005 is flammable. Contents include Methacrylate ester and acids. 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 the reach of children. Keep away from heat, sparks, and open flames. Do not smoke cigarettes or anything else while handling or near the product. Refer to the BD7005 Safety Data Sheet for more complete safety instruction. To assure maximum bond strength, surfaces must be mated together within the specified working time, and all clamps affixed within that time. Use sufficient material to ensure that the joint is completely filled when parts are mated and clamped. Avoid over clamping parts, which may cause a dry joint or a joint starved of adhesive. All adhesive application, part positioning, fixturing, and clamping should occur before the working time of the adhesive has expired. After the indicated working time, parts must remain undisturbed until the fixture time is completed. Components bonded, adhesive, and shop temperature can have a significant effect on the work and fixture time of the adhesive. Application of BD7005 adhesive at

temperatures between 65°F and 85°F (18°C and 30°C) will ensure proper cure. Temperatures below 65°F (18°C) will slow cure and fixture speed. BD7005 adhesives will still react, but will take longer. Temperatures above 85°F (18°C and 30°C) will increase cure and fixture speeds, and there's a risk that the adhesive will be hardened or too thick to bond materials. The viscosities of BD7005 adhesives are affected by temperature.

6. HANDLING AND STORAGE

The shelf life of BD7005 is six (6) months from the date of manufacture based upon continuous storage at room temperature (77°F or 25°C). Storage of BD7005 adhesives in refrigerated compartments will extend the shelf life even more. Do not store BD7005 adhesive or any other adhesives in a refrigerator which has food or lunch products in them. Be sure to bring BD7005 adhesives to room temperature for 24 hours before use, otherwise longer cure and fixture times may be expected. Long-term storage at temperatures above room temperature will shorten the shelf life of BD7005 adhesives considerably. Storage at temperatures above 95°F or 35°C could shorten the shelf life to less than one month.

7. ADDITIONAL INFORMATION

NOTE: Information contained herein is based on tests we believe to be reliable and accurate. It is offered in good faith for the benefit of the consumer. The Company shall not be liable for any injury, loss, or damage in the use or handling of its chemical products since conditions and use are beyond our control. In every case, we urge and recommend the user conduct tests to determine to their own satisfaction that the product is of acceptable quality and suitability for their particular purpose under their own operating conditions. Statements concerning possible use of our products are not intended as recommendations to use our products in the infringement of any patent, or for any particular purpose or application. These products are intended for industrial use only.