



E-BOND EPOXIES, INC.
P.O. BOX 23069
FORT LAUDERDALE, FL 33307
TOLL FREE: 877-265-0011
PH: 954 566-6555
FAX: 954 566-6663
E-MAIL: info@ebondepoxies.com

E-BOND ZR100/CA340 (1211)

GENERAL PURPOSE EPOXY ADHESIVE



ROOM TEMPERATURE CURE

For professional use only
Not for sale to or use by the general public

DESCRIPTION

E-BOND ZR100/CA340 EPOXY ADHESIVE is an all purpose adhesive and resin for patching and bonding miscellaneous materials such as plastics*, metal and glass laminates to themselves.

- Easy to use, with a simple mixing ratio; ONE TO ONE BY VOLUME
- Provides the user with good open time (working time)
- **E-BOND ZR100/CA340** is a 100% reactive two-component epoxy adhesive
- It provides high strength bonds between most materials
- Once cured, the epoxy adhesive provides excellent resistance to weather. most acid and alkalis
- Cured **E-BOND ZR100/CA340** acts as an electrical insulator
- Zero VOC - Fully reactive, no low boiling constituents

ZR100/CA340 GENERAL PURPOSE EPOXY ADHESIVE IS DESIGNED FOR A NUMBER OF USES

1. Bonding rigid plastic foams to themselves or to metal, plywood, asbestos board or other rigid material.
2. Fabrication of sandwich panels; either honeycomb, polystyrene foam, foam glass, etc.
3. Bonding metal, rigid materials, plastics*, etc. to themselves.
4. Patching concrete with salt-free, kiln-dried silica as a filler.
5. Laminating with glass cloth.
6. Casting of tools or molds which will be subjected to moderate temperature (under 200° F)

* **E-BOND ZR100/CA340** adheres to most plastics. However, due to the wide range of plastics available and their various formulations, the user should determine the suitability of the epoxy adhesive for the particular plastic he intends to use.

Physical Properties

Mixing Ratio:	1:1 by volume
Color:	Resin- Clear Hardener- Amber
Viscosity:	1200 cps
Ad-Mix Pot Life (1 Qt. @ 77° F.)	1 Hour, Approx.
Gel Time:	75-100 min.
HDT:	147°F
Tensile Strength:	7,900 psi
H₂O Absorption:	.25%

SURFACE PREPARATION

All surfaces to receive epoxy or to be bonded must be thoroughly cleaned, degreased and dried. All contaminants that will effect the bond must be removed.

All dust and loose or unsound material must be removed.

Particular caution must be used with plastics to remove all mold release material, if any.

Steel panels must be thoroughly degreased, cleaned and dried.

Aluminum skins should be etched, and dried prior to application of epoxy.

MIXING INSTRUCTIONS

Stir each component thoroughly and carefully to avoid entrapment of air prior to blending.

Use a separate tool for stirring each component.

Blend accurately an equal volume of COMPONENT A with COMPONENT B. Blend thoroughly and carefully together.

Avoid whipping, to eliminate entrapment of air.

Stir until a uniform color is reached.

WORKING TIME

Pot Life of a one (1) quart batch is approximately one (1) hour at room temperature (77°F.)

NOTE: Pot Life and working time can be lengthened substantially when shallow metal mixing vessels are used.

APPLICATION

A) PANEL CONSTRUCTION - Properly mixed **E-BOND ZR100/CA340** may be applied with spatula, trowel, roller, brush, etc. Apply sufficient mixed adhesive to leave approximately 4 to 6 mils of adhesive in the final glue line. Best results may be obtained by applying two to three mils of adhesive to each surface to be mated. On porous and uneven surfaces, more adhesive must be applied to fill the voids and produce a finished glue line thickness of four to six mils. Press parts together firmly enough to obtain and maintain good contact during cure.

B) LAMINATING RESIN - When **E-BOND ZR100/CA340** is properly mixed, it provides a heavy syrupy consistency and has found outstanding use as a laminating resin with fiber glass mat and cloth. Apply mixed epoxy resin and cloth and glass mat pressing firmly into wet epoxy, using caution to avoid entrapment of air pockets, bubbles, etc.

Apply a second coat of the mixed epoxy resin and hardener by roller or brush to the previously applied glass cloth or mat. Continue operation until desired thickness is reached. Allow a minimum period of 24 hours for cure. At this point, **E-BOND ZR100/CA340** will accept sanding and ultimate finishing.

If necessary, **E-BOND ZR100/CA340** may be thickened by adding CAB-0-SIL to the mixing epoxy to obtain heavy to paste-like consistency.

C) CASTING RESIN - Due to the choice of hardener used with E-BOND ZR100 RESIN, satisfactory castings, molds, etc. can be produced. These molds will work quite satisfactorily up temperatures of approximately 180° F. without undue distortion;. Due to the selection of the curing agent and the slowness of reaction, castings up to two to three inches may be cast at one time. Castings in excess of two to three inches should be made in multiple pours. It is advisable to make the second pour within four to five hours after the initial set up time of the first pour.

CURE

At room temperature (77° F.), assemblies and castings can be handled in approximately eight to fourteen hours. **E-BOND ZR100/CA340** develops 80% of its maximum strength in 24 hours. This strength continues to increase for approximately one week.

NOTE -Temperature has a great effect on the cure and the viscosity of the epoxy resin and hardener.

FOR EXAMPLE: A 10° degree drop in temperature from 77° F. will increase the viscosity of the resin and hardener by approximately 50%. Subsequently, a 10 degree increase in temperature over 77° F. will decrease the viscosity of the resin and hardener by approximately 50%. At 50 ° F. resin and hardener will become quite thick and almost non-pourable.

Temperature greatly effects the cure. FOR EXAMPLE: A 10 ° degree drop in temperature will quite often double the working time and set time of the epoxy resin and hardener. Epoxy resin and hardener blend should only be used when the temperature is 55°F. and rising and the temperature will remain above 55°F during the cure of the epoxy resin.

CONSIDERATIONS FOR SURFACE PREPARATION TO AVOID EPOXY INTER-COAT ADHESION PROBLEMS

Amine Blush

Due to humidity and temperatures during curing of epoxies a phenomenon may occur creating an Amine Blush to appear on the cured surface of the epoxy. This may appear as a wax-like or greasy film. If the blush is slight it may be hard to detect visually or by touch. Blush will be more noticeable in cool, damp or humid conditions. Amine blush can hinder bonding of subsequent epoxy layers. The "blush" must be removed before applying additional layers of epoxy. An Amine blush is usually formed after the initial set of the epoxy. As a general rule if a second layer of epoxy cannot be applied within 12 hours after the previous application, it is recommended that the surface be properly prepared to remove any blush that may have occurred.

Light sandblasting between coat applications is the recommended procedure for surface preparation to remove blush or contaminants that may create inter-coat adhesion problems.

Amine blush may also be removed by wet sanding.

Some amine blushes may be water soluble. Test with a pressure wash at a minimum 750 psi with injection of sufficient Dawn® Dishwashing Detergent (usually 2-3%) to remove and clean the surface of contaminants. As an alternative wash down and thoroughly scrub the surface between applications with the solution of Dawn® Dishwashing Detergent. Rinse with plenty of fresh water to thoroughly remove the dissolved blush and allow to dry completely before application of the next layer of epoxy.

Note: Most contractors have advised wash down and scrub with Dawn® Dishwashing Detergent and water because it is easy and does not create a mess. Do not use solvents.

It is important that the user evaluate a small test area for proper preparation and bond before proceeding with a full scale operation.

CAUTION - For professional use only; not for sale to or use by the general public. E-Bond's epoxies contain alkaline amines. Strong sensitizer; MAY CAUSE SKIN SENSITIZATION or allergic response ranging from a mild wheezing to a severe asthmatic type attack. Avoid contact with skin or eyes. IN CASE OF CONTACT immediately wash skin with soap and water. Flush eyes with water and obtain medical attention. Wear protective clothing, goggles, and barrier cream on all exposed skin

LIMITED WARRANTY NOTICE: Every reasonable effort is made to apply E-BOND exacting standards both in the manufacture of our products and in the information which we issue concerning these products and their use. We warrant our products to be of good quality and will replace or, at our election, refund the purchase price of any products proved defective. Satisfactory results depend not only upon quality products, but also upon many factors beyond our control. Therefore, except for such replacement or refund, E-BOND MAKES NO WARRANTY OR GUARANTEE, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE OR MERCHANTABILITY, RESPECTING ITS PRODUCTS, and E-BOND shall have no other liability with respect thereto. E-Bond excludes any warranty for discoloration or change in visual appearance of the product due to accumulation of or streaking of dirt or other airborne materials deposited on the surface from the atmosphere. E-BOND does not warrant the colorfastness of any product. Any claim regarding product defect must be received in writing within one (1) year from the date of shipment. No claim will be considered without such written notice or after the specified time interval. User shall determine the suitability of the products for the intended use and assume risks and liability in connection therewith. Any authorized change in the printed recommendations concerning the use of our products must bear the signature of the E-BOND Technical Manager.

This information and all further technical advice are based on E-BOND's present knowledge and experience. However, E-BOND assumes no liability for providing such information and advice including the extent to which such information and advice may relate to existing third party intellectual property rights, especially patent rights. In particular, E-Bond disclaims all CONDITIONS AND WARRANTIES, WHETHER EXPRESSED OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE OR MERCHANTABILITY. E-BOND SHALL NOT BE RESPONSIBLE FOR CONSEQUENTIAL, INDIRECT OR INCIDENTAL DAMAGES (INCLUDING LOSS OF PROFITS) OF ANY KIND. E-BOND reserves the right to make any changes according to technological progress or further developments. It is the customer's responsibility and obligation to carefully inspect and test any incoming goods. Performance of the product(s) described herein should be verified by testing and carried out by qualified experts. It is the sole responsibility of the customer to carry out and arrange for such testing. Reference to trade names used by other companies is neither a recommendation, nor an endorsement of any product and does not imply that similar products could not be used.