

DESCRIPTION: PolyPoxy® Epoxy Adhesives are two-component, room-temperature curing (RTV) systems designed to be used as general-purpose adhesives as well as a bonding adhesive for TekBoard™ Tooling & Modeling Board.

PolyPoxy® 9024 Fast Set Epoxy Adhesive - a color-indicated, fast-set epoxy adhesive. The Resin side of this epoxy has a green color indicator that will turn to a clear amber when properly mixed with the Hardener side. This indicator system promotes fast and efficient mixing of the Resin and Hardener without wasted time in over-mixing.

PolyPoxy® 5003 Adhesive/Laminating Epoxy - a medium viscosity, dual-purpose adhesive and laminating epoxy. PolyPoxy® 5003 has a longer pot life compared to PolyPoxy® 9024 and is considered an excellent general-purpose adhesive for in-shop use and for adhering tooling board.

BEFORE USE: Thoroughly read Safety Data Sheets, product labels and the "SAFETY" section in this Technical Bulletin.

WARNING: THE EPOXY CURE REACTION IS VERY EXOTHERMIC - IMPROPER USE OF EPOXY ADHESIVE CAN CAUSE WARPING AND EVEN A FIRE. Epoxy adhesive is not suitable for casting applications and is designed to be applied in very thin layers to adhere two substrates together. Exothermic reactions can be greater when working in temperatures higher than the recommended mixing/application temperature range and when the epoxy is in a mass in the mixing container. It is recommended to only mix as much epoxy as will be needed for one layer. Because epoxy is especially exothermic in masses, it is important to work quickly to get the epoxy out of the mixing container and onto the desired surface.

PREPARATION: Before use, be sure that Resin and Hardener are at room temperature (73°F) and that all tools are ready. Surface and air temperatures should be between 60°F and 80°F during mixing, application, and for the entire curing period.

Elevated temperatures will speed the cure of epoxy adhesive, while lower temperature will slow the cure. Very low temperatures could possibly prevent the cure entirely.

A clean, dry surface is necessary to ensure a successful bond. Adhesive

PRODUCT LINE FEATURES

- Room-temperature curing (RTV)

- Excellent for general purpose and tooling board adhesion
- Two options with varying pot lives and set times
- PolyPoxy® 9024 is color-indicated to ensure thorough mixing

can usually be applied directly to porous surfaces as long as they're dry; however, non-porous materials usually require cleaning, drying and roughing.

MIXING: Read product labels to determine the correct mix ratio and if pre-mixing of the Resin or Hardener component is required.

It is recommended to only mix as much epoxy as will be needed for the application. Because epoxy is very exothermic, especially in masses, it is important to work quickly to get the epoxy out of the mixing container and onto the desired surface.

For PolyPoxy® 5003, accurately weigh and dispense the Resin and Hardener components into clean plastic, metal or wax-free paper containers. Mix thoroughly with a mixing tool, scraping the sides and bottom of the mixing container repeatedly.

For small mixes of PolyPoxy® 9024, equal volume amounts of Resin and Hardener can be dispensed onto a disposable surface and then mixed thoroughly with a mixing tool. Mix epoxy until the green color disappears and the epoxy is a uniform, clear amber.

APPLICATION: Application thicknesses should be less than 0.05". For best results, apply adhesives to both surfaces to be adhered and squeeze together. Don't over-clamp/over-tighten.

CURING: Allow adhesive to cure at room temperature for the specified handling time listed in the Physical Properties table in this Technical Bulletin. Movement of parts prior to this time may disrupt adhesion. Low temperatures will slow the curing and extend handling time, while higher temperatures will shorten the handling time.

PHYSICAL PROPERTIES

| PolyPoxy® Product | PolyPoxy® 9024 | PolyPoxy® 5003 |
|----------------------|--------------------------------|-------------------------------------|
| Mix Ratio By Weight | 1 Part Resin : 1 Part Hardener | 100 Parts Resin : 20 Parts Hardener |
| Mix Ratio By Volume | 1 Part Resin : 1 Part Hardener | 100 Parts Resin : 22 Parts Hardener |
| Shore Hardness* | D80 | D86 |
| Cured Color | Clear Amber | Clear |
| Mixed Viscosity (cP) | 13,000 | 3,500 |
| Pot Life | 3 - 5 min. | 14 - 15 min. |
| Handling Time | 15 min. | 3 - 4 hr. |
| Total Cure Time | 7 days | 7 days |
| Specific Gravity | 1.14 | 1.14 |

*All values measured after 7 days at 73°F/23°C.

CLEAN UP: Tools should be wiped clean before the epoxy is hard. Denatured alcohol is a good cleaning solvent but must be handled with extreme caution owing to its flammability and health hazards. Work surfaces can be coated with wax or release agent so that cured plastic can be easily removed.

STORAGE LIFE: For best results, store products in unopened containers at room temperature (60-90°F/15-32°C). Use products within six months from date of shipment.

SAFETY: Before use, thoroughly read Safety Data Sheets and product labels. Follow safety precautions and directions.

Resin: Keep out of reach of children. Avoid breathing fumes, vapors or mists. Use with adequate general or local exhaust ventilation to minimize exposure levels. If needed, a NIOSH-approved respirator with organic vapor cartridge may be used. Wear impervious gloves, such as butyl rubber or nitrile rubber. Wash thoroughly with soap and water after handling. Contaminated work clothing should not be allowed outside of the workplace. Take off contaminated clothing and wash it before reuse. If skin rash or irritation occurs, get medical help. Wear eye protection, such as chemical safety glasses/goggles. If in eyes, rinse cautiously with water for several minutes, removing contact lenses if present and easy to do. If eye irritation persists, get medical help. If spilled, collect spillage and avoid release to the environment.

Hardener: Keep out of reach of children. Do not eat, drink or smoke when using this product. Do not breathe fumes, vapors or mists. Use with adequate general or local exhaust ventilation to minimize exposure levels. Use only outdoors or in well-ventilated area. If needed, a NIOSH-approved respirator with organic vapor cartridge may be used. If inhaled, remove victim to fresh air and keep at rest in a position comfortable for breathing. Wear impervious gloves, such as butyl rubber or nitrile rubber. Wash thoroughly with soap and water after handling. Contaminated work clothing should not be allowed out of the workplace. Take off contaminated clothing and wash it before reuse. If skin rash occurs, get immediate medical help. Wear eye protection, such as safety glasses/goggles. If in eyes, immediately rinse with water for several minutes, removing contact lenses if present and easy to do. Get immediate medical help. If swallowed, rinse mouth and do not induce vomiting. Get medical attention immediately. If spilled, collect spillage and avoid release to the environment.

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DISCLAIMER: The information in this bulletin and otherwise provided by Polytek® Development Corp. is considered accurate. However, no warranty is expressed or implied regarding the accuracy of the data, the results to be obtained by the use thereof, or that any such use will not infringe any patent. Before using, the user shall determine the suitability of the product for the intended use and user assumes all risk and liability whatsoever in connection therewith.

ACCESSORIES

Product Life Extender:
Poly Purge Aerosol Dry Gas