

DESCRIPTION: PolyPoxy® Resins and PolyCure Hardeners are liquids that, after mixing in proper ratio, cure at room temperature to high-strength plastics. Resins can be cured with various curatives enabling users to select the best system for a particular use. The mix ratio for each curing agent and resin blend varies. For best results, carefully weigh the components.

PolyPoxy® 1010 is a clear resin for use with fast **PolyCure 1212** for small castings such as bonded bronze or with fiberglass or fillers for lay-up and mother molds. Use with **PolyCure 1220** for decoupage clear coatings, glass bonding and many other uses where a nearly colorless, clear, low viscosity resin is required.

SURFACE PREPARATION: PolyPoxy Resins are adhesives and bond to many surfaces. If adhesion is not desired, surfaces must be made non-porous with a suitable sealer, such as wax, PVA, lacquer or other coatings. The surfaces must then be coated with a release agent such as Pol-Ease® 2300 Release Agent.

Polyurethane rubber molds (e.g., Poly 74-Series and 75-Series) require a coating of Pol-Ease® 2300 Release Agent prior to casting. Tin-cured and platinum-cured silicone molds (e.g., 80-Series, 73-Series) do not require a release agent when casting epoxy; however, the mold will deteriorate quickly and result in a limited amount of castings. If there is any question about the release properties of epoxy resin against a certain material, perform a small test cure on an identical surface.

MIXING: PolyPoxy and PolyCure liquids must be mixed in the ratios shown below. Mix ratios are by weight except for PolyPoxy 1010 and PolyCure 1220, which can be mixed 1:1 by volume. PolyPoxy and PolyCure must be thoroughly mixed and poured as soon as possible after mixing to ensure low viscosity and good flow. Watch a clock to avoid being caught with unused, cured material.

BONDED BRONZE: For bonded bronze layup or casting, add Bronze Powder to PolyPoxy 1010 with PolyCure 1212. The mix should be at least 83% Bronze Powder by weight added to the already mixed resin. If desired, enough PolyFiber II can be added to make the mix slightly non-sag for layup. Brush or pour a thin film or solid casting into a Poly 74-Series mold sprayed with Pol-Ease 2300 Release Agent. After

High-Strength Epoxy Plastics

Applications

PolyPoxy® 1010 + PolyCure 1212
Bonded bronze and small castings
(maximum casting thickness: 0.5")

PolyPoxy® 1010 + PolyCure 1220
Decoupage coatings and glass bonding
(maximum casting thickness: 1.5")

several hours, when firm, lay in fiberglass mat and saturate with more mixed resin without Bronze Powder or pour the casting solid with less expensive casting resin, such as Poly 15-Series Liquid Plastics. When cured, demold and rub surface with steel wool to bring up highlights. Add patina with an oil spray paint, rub off high spots and when dry, burnish with steel wool and wax if desired.

CLEAN UP: Tools should be scraped clean before the plastic is hard. Denatured ethanol is a good cleaning solvent, but it must be handled with extreme caution owing to its flammability and health hazards. Work surfaces can be waxed or coated with Pol-Ease 2300 Release Agent so cured rubber can be removed.

SAFETY: Before use, read product labels and Safety Data Sheets. Follow safety precautions and directions. PolyCure Hardeners cause severe eye and skin burns. PolyPoxy resins may cause skin irritation and sensitization (i.e., allergic skin rash). Do not get these products in eyes or on skin. Wear personal protective equipment (e.g., gloves and safety glasses, at a minimum). Avoid breathing vapors and use only with adequate ventilation. In case of eye contact, flush with water for 15 minutes and then seek medical attention. **WARNING: THE EPOXY CURE REACTION IS VERY EXOTHERMIC. DO NOT CAST LARGE MASSES - DOING SO CAN RESULT IN A FIRE!**

PHYSICAL PROPERTIES

PolyPoxy® + PolyCure	1010 + 1212	1010 + 1220
Parts PolyCure per 100 of PolyPoxy	15	85 (1:1 by volume)
Mixed Viscosity (cP)	3,000	3,000
Pour Time, 150 g mix @ 77°F (min)	25	30
Demold Time @ 77°F (hr)	4 - 8	48
Maximum Casting Thickness (in)	0.5	1.5
Shore Hardness	D95	D80
Specific Gravity	1.13	1.07
Specific Volume (in ³ /lb)	24.5	26.0
Density (lb/in ³)	0.0408	0.0386

PolyPoxy and PolyCure systems are not to be used where food or body contact may occur. PolyPoxy and PolyCure products burn readily when ignited. Care should be taken with sanding dust and other easily ignitable forms of these products.

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

DISCLAIMER: The information in this bulletin and otherwise provided by Polytek® 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:

Bronze Powder
2 lb, 10 lb, 110 lb

Poly PVA Solution (Green or Clear)
2 lb, 35 lb

PolyFiber II
1-gal pail, 5-gal pail, bag (15 lb)

Pol-Ease® 2300 Release Agent
12-oz can, case of 12

PACKAGING

Product	Sizes	
	Weight (lb)	Volume*
PolyPoxy® 1010	2.0	1 qt
	9.0	1 gal
	45	5 gal
PolyCure 1212	0.25	4 oz
	2.0	1 qt
PolyCure 1220	0.25	4 oz
	2.0	1 qt
	8.0	1 gal
	40	6 gal

*Volume measurements are approximate.