

# EPOXY LAMINATING SYSTEMS



## POLY EPOXY STRUCTURAL EPOXY SYSTEM

Poly Epoxy is a true high-performance epoxy resin with unmatched tensile, compressive, and flex strengths. It also has unbeatable peel, shear, and fatigue resistance, as well as impact strength and fracture behavior. It's great for wings, canards, fuselages, tail feathers, and landing gear. Use it in molds or moldless construction. It parts easily and works beautifully in vacuum bagging. (Avoid silicone-treated peel ply.) It has TWO cure phases, while all other resins—epoxy, polyester, or vinyl-ester—have just one. The two phases occur all by themselves during the curing process. The resulting bond is tougher and stronger than any other.

Poly Epoxy Kit, Quart ..... P/N 01-07905 .....  
Poly Epoxy Kit, Gallon ..... P/N 01-07906 .....  
Poly-poxy Resin Gallon ..... P/N 01-07934 .....  
Poly-poxy Hardener Quart ..... P/N 01-07935 .....  
Poly-poxy Hardener 40 Gallon ..... P/N 01-07933 .....

### POLY EPOXY TECHNICAL DATA

| Mechanical Properties:                           | w/Post Cure | w/o Post Cure |
|--------------------------------------------------|-------------|---------------|
| Tensile Strength, PSI                            | 9600        | 8800          |
| Elongation at Break, %                           | 7.5         | 3.6           |
| Tensile Modulus, PSI                             | 470,000     | 460,000       |
| Flexural Strength, PSI                           | 19,000      | 14,500        |
| Flexural Modulus, PSI                            | 515,000     | 500,000       |
| Compressive Strength, PSI                        | 32,000      | 33,000        |
| Shore D Hardness                                 | 82          | 70            |
| Glass Transition Temp., °C                       | 72          | 62            |
| Heat Distortion Temp., °C                        | 64          | 50            |
| Water Immersion Weight Gain, % (140 °F, 30 days) | 2.8         | 2.9           |

**Rheology:** Mixing Ratio: 3 parts Resin to 1 part Converter by Weight 10 parts Resin to 4 parts Converter by Volume

#### Kinetics:

Pot Life, 100 grams ..... 105 mins    1 quart ..... 75 mins  
Mold Open Time ..... 3-4 hrs    Tack Free Time ..... 5-6 hrs

**AVAILABLE EXCLUSIVELY FROM AIRCRAFT SPRUCE**



## ALPHA POXY NON-STRUCTURAL EPOXY SYSTEM

AlphaPoxy is a low-cost flexible epoxy system that is ideal for laying up non-structural parts like wheel pants, or fairings. Because it is flexible, we don't recommend it for structural applications, such as fabricating load-bearing structural aircraft parts. Use PolyEpoxy for these applications. This is a low-viscosity system specifically formulated for filling with microballoons, cotton floc, or milled glass fibers to make slurries. It was designed for maximum sandability; when cured, it is soft enough to be easily cut with sandpaper smoothing a breeze. AlphaPoxy is also excellent when used as a final filler resin over structural parts when an epoxy gel coat is called for. You can use it in place of polyester resins for a much more durable part at a very attractive price.

AlphaPoxy Kit, 1-1/4 Gallon ..... P/N 01-07911 .....  
AlphaPoxy Hardener, Gallon ..... P/N 01-07909 .....  
AlphaPoxy Resin, 7/8 Gallon ..... P/N 01-07912 .....  
AlphaPoxy Hardener, 5 Gallon pail ..... P/N 01-07910 .....  
AlphaPoxy Hardener, 3/8 Gallon ..... P/N 01-07908 .....  
AlphaPoxy Resin, 5 Gallon pail ..... P/N 01-07913 .....

**Rheology:** Mixing Ratio:

2 parts Resin to 1 part Hardener by Weight

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## AEROPOXY PT1105 EPOXY SURFACE COAT



PT1105 is a white, general purpose room temperature epoxy surface coat resin. The creamy, smooth consistency of the mixed material allows easy application to the model surface with minimum drag. The thixotropic properties of PT1105 permits good coverage on points and sharp corners, and application to vertical surfaces without sagging. Due to the non-galling nature of PT1105, it will give good service in a variety of metal forming applications. When used with Part B hardener, the PT1105 system will cure quickly, and can be sanded or filed in 10 to 12 hours. The cured material is tough, with good chip resistance on edges and sharp details. PT1105 works very well in the fabrication of plastic faced plaster patterns when used with PT1105 B1 hardener.

Quart Kit ..... P/N 09-05263 .....  
Gallon Kit ..... P/N 09-05264 .....  
Gallon Pail Kit ..... P/N 09-05265 .....

## AEROPOXY FROM PTM&W INDUSTRIES



PR2032 is a medium viscosity, unfilled, light amber laminating resin that is designed for structural production applications. 3 hardeners are available for use with PR2032. PH3660, has a 1-hour pot life. When used with either of these hardeners, the system gives excellent wet-out of fiberglass, carbon and aramid fibers. AEROPOXY contains no MDA (a known liver toxin and carcinogen) and meets or exceeds current OSHA requirements for safe use. Hardener PH3665 has a longer pot life than PH3660, 2 hours, that is useful for vacuum bagging larger parts before the resin has gelled. Hardener PH3630 is intended for smaller laminates, fast repairs or additions to a

primary structure. PH3630 pot life is 30 min.

Hardener PH3663 is the standard production hardener for fabricating composite parts. PH3663 a 90 minute working time provides more time for construction. This hardener provides similar mixed viscosities, so handling will be basically the same, except for the different working times.

| Part No. | Description                       | Wt. (lbs.) | Price |
|----------|-----------------------------------|------------|-------|
| 01-42125 | 1 quart PR2032 Resin              | 2.25       | .     |
| 01-42130 | 1 pint PH3660 Hardener            | .66        | .     |
| 01-42135 | PR2032/PH3660 Quart Kit           | 2.91       | .     |
| 01-42140 | 3/4 Gallon PR2032 Resin           | 7.5        | .     |
| 01-42145 | 1 quart PH3660 Hardener           | 2.0        | .     |
| 01-42150 | PR2032/PH3660 Gallon Kit          | 9.5        | .     |
| 01-42155 | 5 Gallon PR2032 Resin             | 48         | .     |
| 01-42160 | 2 Gallon PH3660 Hardener          | 13         | .     |
| 01-42165 | PR2032/PH3660 Pail Kit            | 61         | .     |
| 01-00160 | 1 pint PH3630 Hardener (fast)     | --         | .     |
| 01-00161 | 1 quart PH3630 Hardener (fast)    | --         | .     |
| 01-00162 | 1 pint PH3665 Hardener (slow)     | --         | .     |
| 01-00163 | 1 quart PH3665 Hardener (slow)    | --         | .     |
| 09-05266 | 1 Pint PH3663 Hardener            | --         | .     |
| 09-05267 | 1 Quart PH3663 Hardener           | --         | .     |
| 09-05268 | 1 2.5 Gallon Pail PH3663 Hardener | --         | .     |
| 09-05269 | 1 30 Gallon Drum PH3663 Hardener  | --         | .     |

**Aeropoxy mixing ratio — 100:27 by weight, 3:1 by volume.**