CPD Production Facility

Facility Services

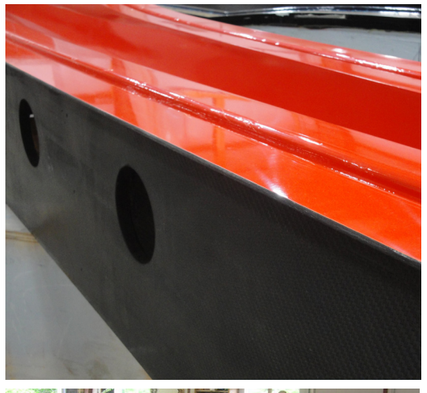
CPD (Composite Polymer Design) has been providing epoxy resin systems that are used in Tooling applications fr over 25 years. We in-house manufacture our products so we can keep up with your changing needs. You can expect that you will get not only an excellent epoxy system from us, but also excellent technical and customer service. This is a sampling of our most popular products for Tooling applications, if you do not see exactly what you are looking for please call us so we help you find something in our vast library of product formulas. You can trust us with our Tooling products because we care about the success of our customers.

Custom Formulations

Endurance Technologies specializes in epoxy and polyurethane formulations. We service many industries and are always willing to help our customers resolve technical problems they may experience. In doing so, this enables us to gain a working knowledge of our customers' process and gain their trust. This has helped our business grow with our loyal customer base.

Please take a moment and review our offerings. Feel free to contact us with any questions you may have. We look forward to working on your next project with you.

Photos from Custom Composite Technologies



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CPD
CUSTOM POLYMER DESIGNS

Tooling Products Guide

Product Category	System/Description	Mix Ratio		Pot Life		Mixed Viscosity	Density	Hardness	Compressive Strength	Tensile Strength	Heat Deflection Temp		Shrinkage	Machinablity	Color
		by weight	by volume	1 lb. mass	150g. mass	centipoise	lb/in^3	shore	psi	psi	Room Temp.	Post Cure	in/in		
Room Temperature Casting Resin	***301A/301B*** **Aluminum filled, Cast ≤ 3/4" Thick** Cures at room temperature. Compatible with molds made of plaster, wood, metal or plastic. Additional aluminum can be added at your facility. Very good machinablity.	12:1	6.2:1	45	65	7,000	0.067	92D	13,500	4,500	135	170	<0.002	Very Good	Grey
High Temperature Casting Resins	***9533A/9286B*** **Aluminum filled, 350°F Service, Cast ≤ 2" Thick** Excellent for fabricating vacuum forming molds. Low viscosity and machines well. Requires a post cure to acheive ultimate mechanical properties.	100:6	9.25:1	60	90	18,000	0.059	89D	35,000	6,800	PCR	355	<0.002	Very Good	Grey
	2136A/9276B **Aluminum Filled, 450°F Service, Cast ≤ 2" Thick** Compatible with mold made of plaster, wood, metal or plastic. Requires a post cure to achieve ultimate properties.	100:6	9.25:1	60	90	18,500	0.059	91D	36,000	6,700	PCR	455	<0.002	Very Good	Grey
Room Temperature Surface Coat	***406A/406B*** **General Purpose, Low Cost** Easy to brush, thixotropic surface coat with good "hang-up" qualities. CPD 406 can be brushed on or applied with a squeegee. Use with CPD 506A/506B.	10:1	6.6:1	20	25	Thixotropic	0.056	89D	13,800	6,800	130	165	<0.0003	Fair	White
High Temperature Surface Coats	***2102A/9245B*** **275°F service** Thixotropic and aluminum filled surface coat designed for use at elevated temperatures. Use for wet lay up, autoclaved and compression molded parts. Requires post cure.	100:14	6:1	45	60	Paste	0.044	89D	25,000	4,400	PCR	282	<0.002	Good	Black
	2132A/9284B **350°F service** Thixotropic, aluminum filled surface coat designed specifically for 350°F service. Use for wet lay-up, autoclaved parts and compression molded parts. Post cure required.	10:1	7:1	25	30	Paste	0.049	92D	28,500	7,800	PCR	355	<0.002	Good	Grey

PCR = Post Cure Required * = Heat Required for Infusion & injection ** = Gel Time at 170°F

Cast-A-Form

9600, 9601, 9602 **Hot Melt Eutectic Salt**

Cast-A-Form is a water soluble hot melt system suitable for creating mold and mandrel forms which may be used in the manufacture of various composite structures including hollow items such as ducts and tanks or pressure vessels. It is a powder, which only requires melting and subsequent pouring into a heat resistant mold. It solidifies on cooling and may be easily demolded without the use of mold release agents.

Handling Properties	9600	9601	9602
Heat Resistance, °F	275	350	450
Melting & Pouring Temperature, °F	306-333	326-420	441-550
Mold Preheat Temperature, °F	150-200	175-225	300-350

Product Category	System/Description	Mix Ratio		Pot Life		Mixed Viscosity	Density	Hardness	Compressive Strength	Tensile Strength	Heat Deflection Temp		Shrinkage	Machinablity	Color
		by weight	by volume	1 lb. mass	150g. mass	centipoise	lb/in^3	shore	psi	psi	Room Temp.	Post Cure	in/in		
Room Temperature Laminating Resins	***506A/506B*** **General Purpose** Rapid-setting, low viscosity, laminating resin that can be used in other diverse applications. Works well with CPD 406A/B surface coat.	100:17	3.5:1	22	30	3,000	0.049	89D	38,000	24,400	135	180	<0.001	Fair	White
	574A/574B **Unfilled, Toughened** Rapid-setting, low viscosity, laminating resin that works well in adhesive applications for pattern model shops because of it's toughened properties.	100:25	3.5:1	15	20	700	0.04	82D	37,800	13,900	140	190	<0.001	Fair	Amber
	2165A/9245B **250°F service** Fast-setting lamination system for use at elevated temperatures. Excellent wet out characteristics and provides tough laminate product for tooling. Mild post cure required.	100:25	3.5:1	40	50	2,500	0.041	93D	18,800	12,900	PCR	272	<0.002	Fair	Amber
High Temperature Laminating Resins	***2134A/9286B*** **350°F service** Unfilled, laminating resin system designed for use at elevated temperatures. Low viscosity ensures excellent wet out of parts. Post cure required.	100:14	6:1	40	50	1,800	0.041	88D	21,500	12,400	PCR	355	<0.002	Fair	Amber
	2135A/9276B **450°F service** Unfilled, laminating resin system designed for use at elevated temperatures. Low viscosity ensures excellent wet out of parts. Post cure required.	100:14	6:1	40	50	1,900	0.041	90D	25,000	11,800	PCR	455	<0.002	Fair	Amber
High Temperature Infusion Resins	***4310A/9234B*** **250°F service** Medium pot life, low viscosity system developed for infusion for parts that need to handle a service temperature above 250°F. Post cure required.	100:20	4:1	TBD	60	500*	0.041	85D	15,800	11,800	PCR	259	<0.0002	Fair	Amber
	4303-1A/4303-1B **400°F service** Unfilled epoxy system designed for service up to 350°F. Low viscosity at elevated temperatures ensures maximum wet out of fiberglass, carbon fiber or kevlar. Post cure required.	100:107	100:103	TBD	180**	750*	0.043	87D	25,600	12,100	PCR	375	<0.005	Fair	Green
	4307A/4303-1B **350°F service, Toughened** High temperature infusion resin with enhanced fracture toughness, peel and lap-shear strength due to core shell rubber filler. Excellent wet out at elevated temperatures. Post cure required.	100:88	100:82	TBD	180**	1,800*	0.043	87D	14,700	10,500	PCR	345	<0.005	Fair	Brown

PCR = Post Cure Required * = Heat Required for Infusion & injection ** = Gel Time at 170°F