

CPD

Product by Process Guide

Wet Layup Systems

Low Viscosity

Rapid wet out, good penetration a variety of substrates and excellent adhesion.

Product	Mix Ratio	Gel Time	Mixed Viscosity	Compressive Strength	Tensile Strength	HDT
2207A/4205B	5:1 vol	15 min	1,500 cP	15,400 psi	10,200 psi	173°F*
2207A/4206B	5:1 vol	25 min	1,100 cP	12,900 psi	10,300 psi	140°F*

* Post Cured

Medium Viscosity

Versatile system for open mold laminating or vacuum bagging with rapid wet out of reinforcements.

Product	Mix Ratio	Gel Time	Mixed Viscosity	Compressive Strength	Tensile Strength	HDT
4222A/9371B	3:1 vol	22 min	1,260 cP	12,800 psi	12,700 psi	134°F
4222A/9372B	3:1 vol	60 min	800 cP	14,600 psi	10,300 psi	130°F
4222A/9373B	3:1 vol	215 min	580 cP	13,500 psi	8,500 psi	125°F
4222A/9835B	3:1 vol	260 min	1,000 cP	16,400 psi	9,500 psi	270°F*

4222A/9835B is a high temperature option * Post Cured

Thixotropic

For open molding with good vertical hang, low to no drain & pinhole free when vacuum bagged.

Product	Mix Ratio	Gel Time	Mixed Viscosity	Compressive Strength	Tensile Strength	HDT
4215A/9384B	3:1 vol	15 min	2,500 cP	15,000 psi	11,000 psi	215°F*
4215A/9371B	3:1 vol	18 min	Thixo	13,000 psi	9,000 psi	173°F*
4215A/9372B	3:1 vol	28 min	Thixo	14,400 psi	7,000 psi	185°F*
4215A/9373B	3:1 vol	129 min	Thixo	12,700 psi	10,000 psi	166°F*

Thixo = Thixotropic | * Post Cured

Room Temperature Tooling

White filled room temperature cure, low-cost tooling resin.

Product	Mix Ratio	Gel Time	Mixed Viscosity	Compressive Strength	Tensile Strength	HDT
506A/506B	100:17 wt	30 min	3,000 cP	38,000 psi	25,000 psi	200°F

* Post Cured

Toughened Resin

Toughened epoxy resin for laminates requiring crack and fatigue mitigation properties.

Product	Mix Ratio	Pot Life	Mixed Viscosity	Compressive Strength	Tensile Strength	Tg. Post Cure
9315A/9315B	100:33 wt	60 min	1,000 cP	14,700 psi	11,700 psi	185°F

Core shell toughened infusion resin for parts requiring high fatigue resistance, and crack mitigation.

Product	Mix Ratio	Gel Time ¹	Mixed Viscosity ²	Compressive Strength	Tensile Strength	HDT
4505A/4505B	3:1 vol	80 min	400 cP	9,400 psi	8,500 psi	172°F*

¹ Gel time at 75°F, 150 g mass | ² Initial mixed viscosity, 75°F | * Post Cured

Flame Retardant Systems

Fire retardant, FAR 25.853 and UL-94 VO compliant low viscosity intumescent epoxy resin with good room temperature cure and heat deflection temperature.

Product	Mix Ratio	Gel Time	Mixed Viscosity	Compressive Strength	Tensile Strength	HDT
4288A/9239B	100:18 wt	70 min	290 cP	16,100 psi	7,900 psi	224 F**

* Post Cured

Clear, UV-stabilized, halogen free flame retardant system for infusion.

Product	Mix Ratio	Gel Time	Mixed Viscosity	Compressive Strength	Tensile Strength	HDT
4292A/9239B	4:1 vol	40 min	250 cP	11,200 psi	9,200 psi	147°F*

* Post Cured

Clear fire retardant resin for cosmetic parts like carbon fiber or coating.

Product	Mix Ratio	Gel Time	Mixed Viscosity	Compressive Strength	Tensile Strength	HDT
4289A/4289B	7:1 vol	70 min	400 cP	10,700 psi	7,400 psi	140°F*

* Post Cured

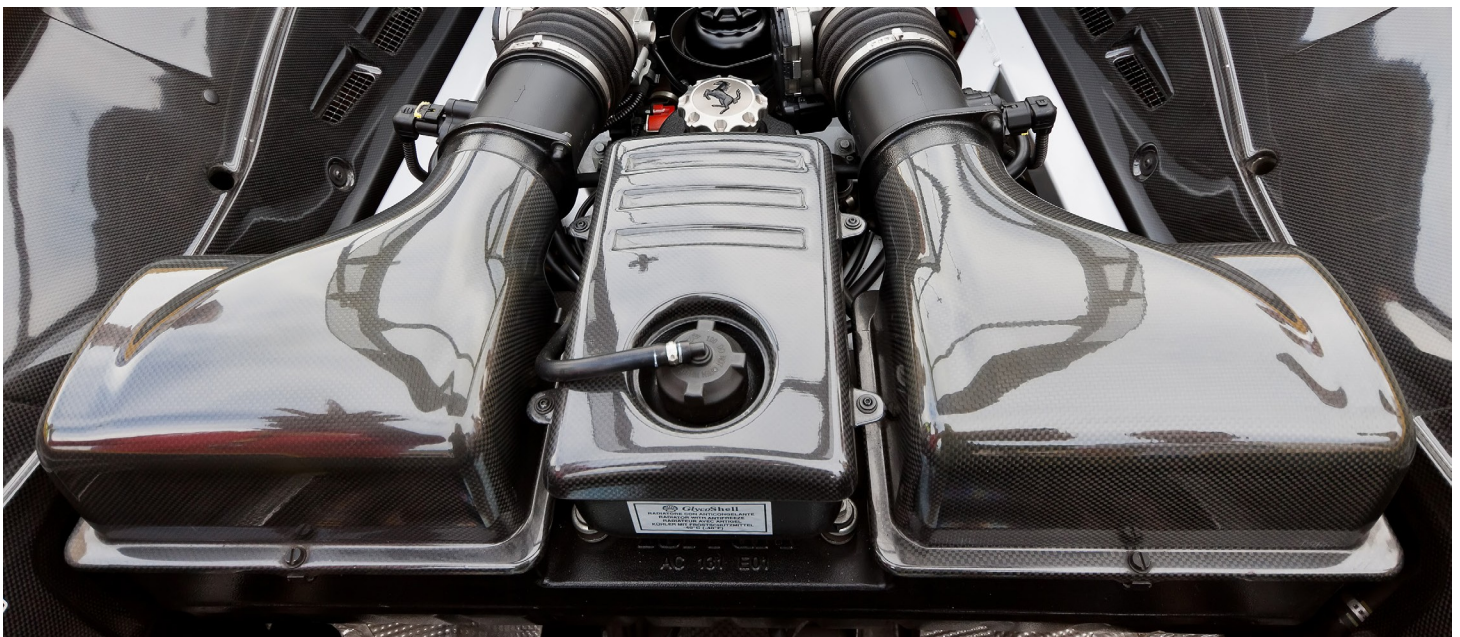
FR Laminating

Medium-setting, flame retardant epoxy compound that meets or exceeds UL 94 VO.

Product	Mix Ratio	Gel Time	Mixed Viscosity	Compressive Strength	Tensile Strength	HDT
4287A/4286B	100:22 vol	40 min	1,900 cP	17,000 psi	7,000 psi	240°F

Clear, halogen-free flame retardant system that is UV stabilized.

4289A/4289B	7:1 vol	54 min	1,500 cP	10,900 psi	7,600 psi	140°F
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Filament Winding Systems

Product	Mix Ratio	Gel Time	Mixed Viscosity	Compressive Strength	Tensile Strength	HDT
3727A/3955B	100:27 wt	160 min	1,300 cP	15,400 psi	11,900 psi	315°F*
3727A/3951B	100:36 wt	200 min	1,000 cP	12,200 psi	9,800 psi	240°F*
3727A/3954B	100:45 wt	250 min	1,500 cP	10,700 psi	9,100 psi	183°F*
3727A/3953B	100:45 wt	585 min	1,300 cP	11,100 psi	9,000 psi	191°F*

* Post Cured

3727A/3955B >300°F Tg epoxy resin for winding of high-performance parts requiring thick cross sections with crack mitigation properties.

3727A/3951B Medium heat resistant epoxy for filament winding high performance parts with excellent color.

3727A/3954B Snap cure amine system with long open time for filament winding yet a very fast cure cycle with low heat required.

3727A/3953B General purpose amine cured system with long open time for filament winding of composites.

Product	Mix Ratio	Gel Time ¹	Mixed Viscosity	Compressive Strength	Tensile Strength	Tg by DMA, E1 onset, dry
4303-1A/4303-1B	100:107 wt	2-4 hrs	750 cP	25,600 psi	12,100 psi	417°F*

¹ Gel time at 170°F, 150 g mass, minutes | * Post Cured

Toughened cycloaliphatic epoxy resin/anhydride cured tooling version of 4303-1a/b.

Product	Mix Ratio	Gel Time ¹	Mixed Viscosity ²	Compressive Strength	Tensile Strength	HDT
4307A/4303-1B	100:88 wt	2-4 hrs	1,800 cP	14,700 psi	10,500 psi	375°F*

¹ Gel time at 170°F, 150 g mass, minutes | ² Initial mixed viscosity, 75°F | * Post Cured

450°F Tg winding epoxy with excellent chemical resistance and extended open time for baths.

Product	Mix Ratio	Pot Life ¹	Mixed Viscosity ²	Compressive Strength	Tensile Strength	HDT
2135A/9529B	100:6 wt	12 hrs	5,500 cP	27,100 psi	10,200 psi	450°F*

¹ Pot life at 75°F | ² Initial mixed viscosity, 75°F | * Post Cured



CIPP/Infrastructure Systems

CIPP epoxy resin system with 5 choice hardeners depending on speed and temperature resistance need for performance.

Product	Mix Ratio	Gel Time ¹	Mixed Viscosity	Compressive Strength ²	Tensile Strength	HDT
4210A/4436B	5:1 vol	25-30 min	2,500 cP	>20,000 psi	>30,000 psi	265°F*
4210A/9302B	4:1 vol	12-15 min	3,500 cP	>20,000 psi	>30,000 psi	190°F*
4210A/9303B	4:1 vol	30-35 min	2,400 cP	>20,000 psi	>30,000 psi	190°F*
4210A/9308B	4:1 vol	50-60 min	2,500 cP	>20,000 psi	>30,000 psi	240°F*
4210A/9391B	2:1 vol	60-70 min	2,900 cP	>20,000 psi	>30,000 psi	175°F*

¹ Gel time at 25°C, 100 g mass, minutes | ² Compressive Strength Properties of laminated prepared using A-260 e-glass and a 40/60 resin/fiber ratio following a 4 hour post cure at 130°F | High Temperature Option | * Post Cured

Laminating resin for high performance infrastructure repairs with carbon or e-glass laminates.

Product	Mix Ratio	Gel Time	Mixed Viscosity	Compressive Strength	Tensile Strength	HDT
2110A/9298B	4:1 vol	45 min	750 cP	12,500 psi	10,500 psi	210°F*

* Post Cured

Pipe repair epoxy resin system with rapid development of properties.

Product	Mix Ratio	Gel Time	Mixed Viscosity	Compressive Strength	Tensile Strength	HDT
4200A/9390B	2:1 vol	50 min	3,000 cP	13,000 psi	9,700 psi	180°F*

* Post Cured

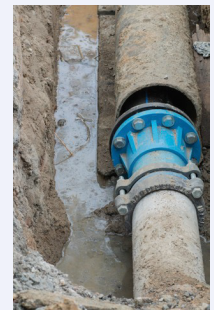
Underwater cure resin system for laminating and repair of infrastructure.

Product	Mix Ratio	Gel Time	Mixed Viscosity	Compressive Strength	Tensile Strength	HDT
2110A/9380B	100:22 wt	18 min	1,500 cP	15,900 psi	9,600 psi	200°F

General Purpose 2:1 mix ratio CIPP system to compete with other commodity systems in this market.

Product	Mix Ratio	Gel Time	Mixed Viscosity	Compressive Strength	Tensile Strength	HDT
4208A/4268B	2:1 vol	15 min	1,300 cP	12,900 psi	10,800 psi	171°F*
4208A/4267B	2:1 vol	40 min	3,300 cP	12,400 psi	9,900 psi	170°F*
4208A/4269B	2:1 vol	230 min	450 cP	9,500 psi	7,600 psi	162°F*

* Post Cured



Adhesives

A medium viscosity adhesive formulated to adhere to metal including oily metals with a long gel time.

Product	Mix Ratio	Gel Time	Mixed Viscosity	Compressive Strength	Tensile Strength	HDT
9495A/9495B	1:1 vol	75 mins	28,000 cP	-	2,200 psi	190°F*

* Post Cured

A medium viscosity adhesive formulated to adhere to metal including oily metals with a medium gel time.

Product	Mix Ratio	Gel Time	Mixed Viscosity	Compressive Strength	Tensile Strength	HDT
9497A/9497B	2:1 vol	25 min	7,000 cP	-	2,800 psi	183°F

A flexible thixotropic epoxy adhesive designed for superior adhesion to metals, plastic, masonry, and fiberglass as well as wet and difficult to bond hardwoods.

Product	Mix Ratio	Gel Time ¹	Mixed Viscosity	Compressive Strength	Tensile Strength	Tg, Ultimate
9498A/9498B	1:1 vol	40 min	Paste	7,200 psi	5,300 psi	213°F*

¹ Gel time at 25°C, 100 g mass, minutes | * Post Cured

A fast curing chemical-resistant epoxy adhesive with excellent sag resistance.

Product	Mix Ratio	Gel Time	Mixed Viscosity ¹	Compressive Strength	Tensile Strength	HDT
9490-7A/9490B	2:1 vol	15 min	120,000 cP	-	10,700 psi	210°F*

¹ Initial mixed viscosity at 25°C, RV-6, 2 rpm | * Post Cured

Epoxy adhesive designed to bond to phenolic grating which also exhibits fire resistance.

Product	Mix Ratio	Gel Time	Mixed Viscosity ¹	Compressive Strength	Tensile Strength	HDT
9491A/9491B	100:37.7 wt	75 min	200,000 cP	16,900	6,200 psi	170°F

¹ Initial mixed viscosity at 25°C, RV-7, 20 rpm

A low viscosity adhesive with superior bonding characteristics and excellent physical properties.

Product	Mix Ratio	Cure Time	Mixed Viscosity	Compressive Strength	Tensile Strength	Tg
9315A/9315B	100:33 wt	16 hrs	1,000 cP	14,700 psi	11,700 psi	185°F*

High Temperature Option | * Post Cured

General purpose epoxy adhesives that come in pre-filled cartridges, found in our MAS Epoxies line.

Product	Mix Ratio	Gel Time	Mixed Viscosity	Compressive Strength	Tensile Strength	HDT
Gluzilla Fast	2:1 vol	10-15 min	750 cP	9,600 psi	8,500 psi	133°F
Gluzilla	2:1 vol	30-35 min	5,500 cP	9,000 psi	6,000 psi	122°F

**Gel times are measured at 25°C in 150 g mass unless otherwise noted.
Mixed viscosity is the initial mixed viscosity at 25°C unless otherwise noted.**

Pultrusion Systems

Low viscosity, quick curing epoxy for pultrusion. Pair with an aromatic amine curing agent high line speeds can be achieved with low backloads and good surface quality. Properties vary with hardener used.

Product	Mix Ratio	Pot Life	Resin Viscosity	Compressive Strength	Tensile Strength	HDT
9310A	-	-	300-500 cP	-	-	330F°

Pultrusion epoxy resin with high heat distortion temperature over 400°F.

Product	Mix Ratio	Gel Time ¹	Mixed Viscosity	Compressive Strength	Tensile Strength	Tg by DMA, E1 onset, dry
4303-1A/4303-1B	100:107 wt	2-4 hrs	750 cP	25,600 psi	12,100 psi	417°F*

¹ Gel time at 170°F, 150 g mass, minutes | * Post Cured

General purpose standard bis-A epoxy/anhydride cure system for fiberglass or carbon parts.

Product	Mix Ratio	Gel Time ¹	Mixed Viscosity	Compressive Strength	Tensile Strength	HDT
2128A/4302B	1:1 vol	30 min	2,000 cP	15,400 psi	9,200 psi	260°F*

¹ Gel time at 85°C 150 g mass, minutes | * Post Cured

Elevated temperature setting, white, flame-retardant epoxy that meets or exceeds the requirements of UL 94 VO and FAR 25.853 (a) of FAA standards.

Product	Mix Ratio	Gel Time ¹	Mixed Viscosity	Compressive Strength	Tensile Strength	HDT
4282A/4302B	100:60 wt	30 min	3,200 cP	17,000 psi	3,600 psi	250°F*

¹ Gel time at 85°C 150 g mass, minutes | * Post Cured

Prepreg & Composite Bonding Systems

250°F cure resin for making pre-preg fibers with toughened qualities.

Product	Mix Ratio	Gel Time ¹	Mixed Viscosity	Compressive Strength	Tensile Strength	HDT
2217A	-	18 min	solid	13,600 psi	10,000 psi	240°F

¹ Gel time at 240°F, 15 g mass, minutes

Wet lay-up epoxy resin that can then be refrigerated for pre-preg type use.

Product	Mix Ratio	Pot Life	Mixed Viscosity	Compressive Strength	Tensile Strength	HDT
9525A/9525B	3:1 vol	-	1,300 cP	-	10,900 psi	320°F*

* Post Cured

350°F cure resin for making pre-preg fibers with toughened qualities.

Product	Mix Ratio	Gel Time ¹	Resin Viscosity ²	Compressive Strength	Tensile Strength	HDT
2211A	-	60 min	10,000 cP	18,000 psi	-	385°F*

¹ Gel time at 250°F, 15 g mass, minutes | ² Resin viscosity at 180°F | * Post Cured

Single component composite adhesive for co curing with pre-preg or bonding pre-cured laminates to core.

Product	Mix Ratio	Pot Life *	Resin Viscosity ²	Compressive Strength	Tensile Strength	HDT
4624A	-	250 mins *	Thixotropic	-	-	220°F*

* Pot life at 250°F, 100 g mass, minutes | ² Resin viscosity at 75°F | * Post Cured

High Temperature Infusion Systems

Medium temperature infusion resin designed for tooling or composites with 250°F or greater applications such as pre-preg molds.

Product	Mix Ratio	Gel Time	Mixed Viscosity	Compressive Strength	Tensile Strength	HDT
2110A/9234B	3:1 vol	100 min	300 cP	16,400 psi	12,500 psi	284°F*

* Post Cured

High temperature infusion resin with low coefficient of thermal expansion designed for tooling like applications with excellent wet out of reinforcements.

Product	Mix Ratio	Gel Time	Mixed Viscosity	Compressive Strength	Tensile Strength	HDT
4310A/9234B	100:25 wt	110 min	400 cP	16,700 psi	12,600 psi	312°F*

* Post Cured

>300°F Tg tooling multifunctional resin with low coefficient of thermal expansion for tooling applications and extra long pot life.

Product	Mix Ratio	Gel Time	Mixed Viscosity	Compressive Strength	Tensile Strength	Tg by DMA, E1 onset, dry
4605A/9231B	100:35 wt	>480 min	600 cP	-	6,900 psi	307°F*

* Post Cured

>400°F Tg multifunctional tooling resin with low coefficient of thermal expansion for tooling or other composites applications ultra long pot life.

Product	Mix Ratio	Gel Time	Mixed Viscosity	Compressive Strength	Tensile Strength	HDT
4600A/9231B	100:50 wt	10 hrs	600 cP	18,000 psi	-	>420°F*

* Post Cured

>400°F Tg Cycloaliphatic epoxy/anhydride cured tooling epoxy resin for large thick cross-sectional composites.

Product	Mix Ratio	Gel Time ¹	Mixed Viscosity	Compressive Strength	Tensile Strength	Tg by DMA, E1 onset, dry
4303-1A/4303-1B	100:107 wt	2-4 hrs	750 cP	25,600 psi	12,100 psi	417°F*

¹ Gel time at 170°F, 150 g mass | * Post Cured

Toughened cycloaliphatic epoxy resin/anhydride cured tooling version of 4303-1a/b.

Product	Mix Ratio	Gel Time ¹	Mixed Viscosity ²	Compressive Strength	Tensile Strength	HDT
4307A/4303B	100:88 wt	2-4 hrs	1,800 cP	14,700 psi	10,500 psi	375°F*

¹ Gel time at 170°F, 150 g mass | ² Initial mixed viscosity, 75°F | * Post Cured



Resin Transfer Molding/Vacuum Assisted Resin Transfer Molding Systems

Low viscosity, clear, latent epoxy system allows for infusion/LRTM/or VARTM with snap cure capabilities.

Product	Mix Ratio	Gel Time	Mixed Viscosity	Compressive Strength	Tensile Strength	HDT
2110A/3875B	4:1 vol	60 min	500 cP	16,000 psi	11,000 psi	253°F*

* Post Cured

Medium Viscosity, clear, latent epoxy system for HP-RTM , LRTM,and VARTM feature “snap cure” capability with fast development of Tg directly out of mold.

Product	Mix Ratio	Gel Time	Mixed Viscosity	Compressive Strength	Tensile Strength	HDT
3612A/3875B	4:1 vol	60 min	1,300 cP	17,400 psi	12,100 psi	261°F*

* Post Cured

Low viscosity snap cure system with >300°F HDT and rapid physical development when heat cured.

Product	Mix Ratio	Gel Time	Mixed Viscosity	Compressive Strength	Tensile Strength	HDT
4310A/9231B	100:35 wt	500 min	500-700 cP	13,500	7,100 psi	310°F*

* Post Cured

Low viscosity snap cure system with >400°F HDT and rapid physical development when heat cured.

Product	Mix Ratio	Gel Time	Mixed Viscosity	Compressive Strength	Tensile Strength	HDT
4600A/9231B	100:50 wt	10 hrs	600 cP	18,000	n/a	>420°F*

* Post Cured

Low Temperature Infusion Systems

Epoxy system designed for infusion, fast wet out of composite reinforcements, and excellent room temperature cure capabilities followed by low temperature post cure.

Product	Mix Ratio	Gel Time	Mixed Viscosity	Compressive Strength	Tensile Strength	HDT
2110A/9262B	3:1 vol	35 min	300 cP	14,800 psi	11,400 psi	200°F*
2110A/9260B	3:1 vol	50 min	300 cP	14,200 psi	10,800 psi	200°F*
2110A/9227B	3:1 vol	130 min	300 cP	13,800 psi	10,300 psi	190°F*
2110A/9226B	3:1 vol	460 min	300 cP	11,700 psi	9,300 psi	175°F*

* Post Cured

Very low viscosity resin for small composite hard to wet out products, or for reinforcements like carbon with rapid cure development.

Product	Mix Ratio	Gel Time	Mixed Viscosity	Compressive Strength	Tensile Strength	HDT
4281A/4284B	100:22 wt	40 min	150 cP	18,800 psi	10,300 psi	180°F*
4281A/4286B	100:22 wt	70 min	220 cP	15,800 psi	12,500 psi	210°F*

* Post Cured

**Gel times are measured at 25°C in 150 g mass unless otherwise noted.
Mixed viscosity is the initial mixed viscosity at 25°C unless otherwise noted.**

CPD is Now Part of the Polytek Family

The expertise of CPD in epoxy and polyurethane formulations for a variety of markets adds significant value to the Polytek portfolio of products. In addition, the customer-centric culture and technical expertise of CPD aligns with Polytek's mission to facilitate the success of our customers.

This brochure represents a sampling of our most popular **Products by Process**. If you do not see exactly what you are looking for, please call us and we can help you find the right products for your application.

About Polytek

Started in 1984, Polytek Development Corporation, is a leading manufacturer of specialty polymers including polyurethane elastomers, casting resins, silicones, epoxies, and latex systems.

Polytek's collective mission is to design and manufacture the highest-performance line of liquid rubbers and related casting products as well as to provide our customers with unmatched, industry-setting technical support and customer service. In doing so, we are committed to helping our customers realize the greatest value from the use of our products and our resources.

In the end, our success is defined by yours.



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