



**CPD**  
CUSTOM POLYMER DESIGNS

## ***Snap-Cure Product Guide***

# Snap-Cure Product Guide

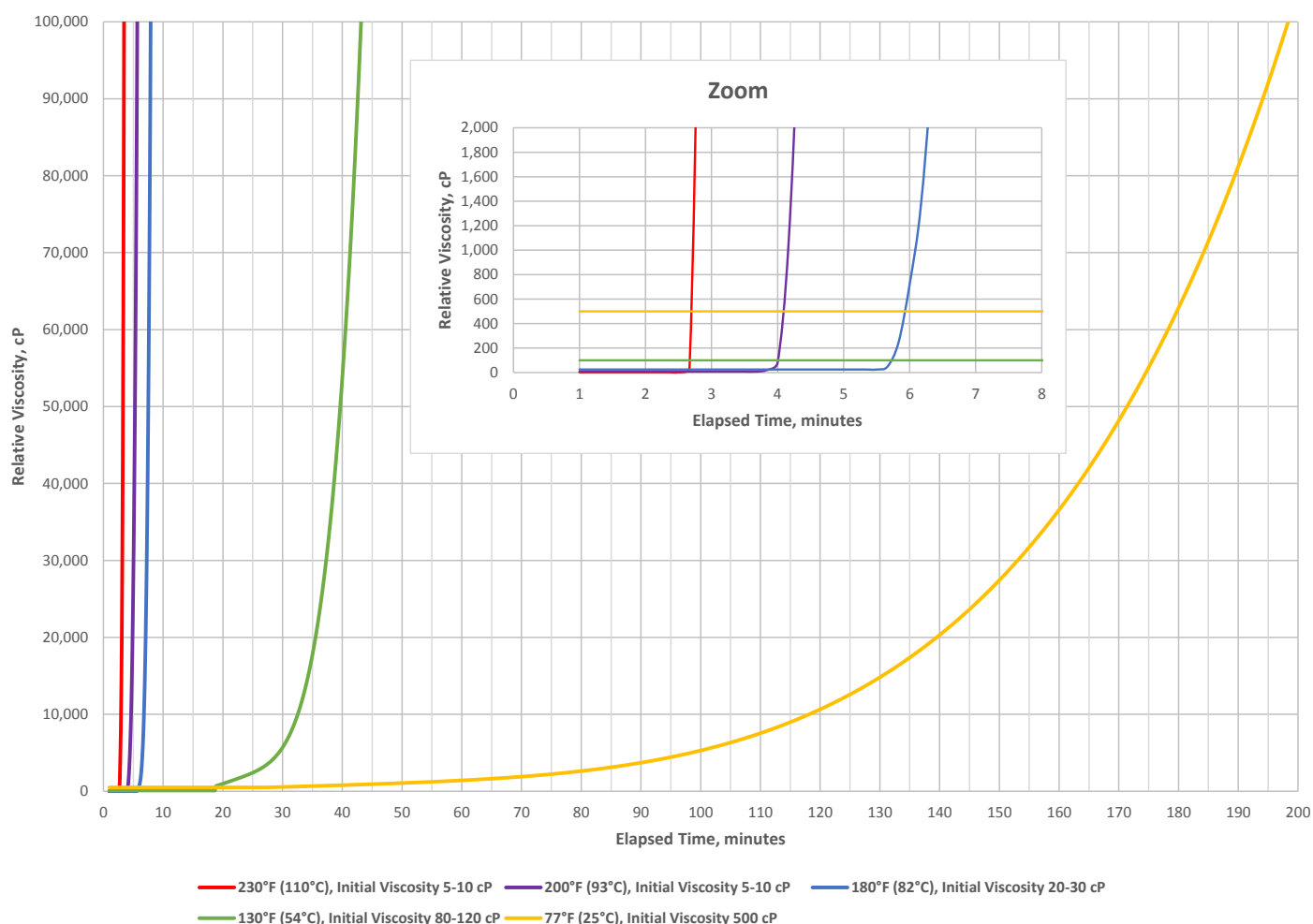
Products that offer a latent cure provide various benefits to manufacturers who need flexibility with their cure time. With advances in snap-cure technology we can now offer options for multiple application styles including, RTM, infusion and filament winding. With the addition of heat these products can greatly improve productivity, increase equipment capacity and provide energy savings. They offer a faster post cure or no post cure after heat cure.

## Resin Transfer Molding

Increase cycle times and production speed with snap-cure products for resin transfer molding (RTM). Different viscosity systems work for room temperature and medium temperature applications. CPD 3612A with 3875B is the ideal choice for standard high-pressure RTM. CPD 2110A with 3875B is recommended for vacuum assisted resin transfer molding (VARTM) or Light RTM. CPD 4600A with 9231B is high temperature option for RTM.

Resin Transfer Molding Systems	Mix Ratio by Volume	Gel Time, 150 mass, 77°F	Recommended Cure Temperature	Cure Time at Temperature	Initial Mixed Viscosity, 77°F	HDT, Post Cure
<b>CPD 3612A/3875B</b>	4A : 1B	50-60 min	230°F	10 minutes	1,300 cP	261°F
<b>CPD 2110A/3875B</b>	4A : 1B	50-60 min	230°F	10 minutes	500 cP	253°F
<b>CPD 4600A/9231B</b>	1.6A : 1B	10 hours	230°F	30 minutes	600 cP	420°F

Light RTM and VARTM  
CPD 2110A/3875B Relative Viscosity Curves



Above is an example of the effects of temperature on the viscosity of CPD 2110A/3875B. The increase in viscosity shows how the elevated temperatures will reduce the gel time and speed the cure of the product.



## Press Molding

*All HDTs and cured properties are reported with a full post-cure of the system.*

Reduce post cure time without sacrificing finished properties. A shorter post cure saves energy and oven time which provides cost savings and more capacity for equipment. Take full advantage of your heated press with a latent cure system like CPD 9610A/9610B.

Press Molding Systems	Mix Ratio by Weight	Gel Time, 150 mass, 77°F	Recommended Cure Temperature	Cure Time at Temperature	Initial Mixed Viscosity, 77°F	HDT, Post Cure
<b>CPD 9610A/9610B</b>	100A : 14B	45 min	200°F	10 minutes	1,200 cP	210°F

## Vacuum Bagging

Large or complex composite parts require time and care when laminating and vacuum bagging. With our latent cure system, you do not have to compromise a long working time for a fast cure time. Start your set up without rushing, apply heat to cure and get speed when you are ready.

Vacuum Bagging Systems	Mix Ratio by Weight	Gel Time, 150 mass, 77°F	Recommended Cure Temperature	Cure Time at Temperature	Initial Mixed Viscosity, 77°F	HDT, Post Cure
<b>CPD 3610A/3875B</b>	100A : 21B	60-70 min	180°F	30 minutes	500 cP	206°F

## Infusion

Do not be limited by gel time when designing infused composite parts. These systems give ample time to infuse a part at room temperature without concerns of premature curing which can reduce the resin content in your laminate.

Infusion Systems	Mix Ratio by Weight	Gel Time, 150 mass, 77°F	Recommended Cure Temperature	Cure Time at Temperature	Initial Mixed Viscosity, 77°F	HDT, Post Cure
<b>CPD 4281A/4284B</b>	100A : 22B	40 min	130°F	75 minutes	150 cP	180°F
<b>CPD 4281A/4286B</b>	100A : 22B	70 min	130°F	120 minutes	220 cP	210°F

## Filament Winding

For filament winding the latent cure option allows for long bath open times like conventional curing agents. When heated, these hardeners will cure in one-third the time with higher Tg/HDT improving your throughput, saving oven energy, and improving overall production efficiency.

Filament Winding Systems	Mix Ratio by Weight	Gel Time, 150 mass, 77°F	Recommended Cure Temperature	Cure Time at Temperature	Initial Mixed Viscosity, 77°F	HDT, Post Cure
<b>CPD 3727A/3954B</b>	100A : 45B	250 min	180°F	60 minutes	1,500 cP	183°F
<b>CPD 3727A/3955B</b>	100A : 27B	160 min	230°F	15 minutes	1,300 cP	315°F

*HDT= Heat Deflection Temperature*

## Single Component

*All HDTs and cured properties are reported with a full post-cure of the system.*

CPD 4305 is a one component epoxy that is stable at room temperature. Whether you are filament winding, vacuum bagging, infusing, or adhering, this product allows unlimited working time at ambient then activated by simply heating to 250°F.

Single Component Systems	Mix Ratio by Weight	Gel Time, 150 mass, 77°F	Recommended Cure Temperature	Cure Time at Temperature	Initial Mixed Viscosity, 77°F	HDT, Post Cure
<b>CPD 4305</b>	N/A	N/A	250°F	100 minutes	5,700 cP	425°F

## Cured-In-Place-Pipe

This novel curing technology allows for the same working time as other popular CIPP systems in the marketplace but will cure in a fraction of the time. This improves the application efficiency by reducing time with boiling water or steam and allowing pipe to be returned to service quicker.

CIPP Systems	Mix Ratio by Weight	Gel Time, 150 mass, 77°F	Recommended Cure Temperature	Cure Time at Temperature	Initial Mixed Viscosity, 77°F	HDT, Post Cure
<b>CPD 3610A/3875B</b>	100A : 21B	60-70 min	180°F	30 minutes	500 cP	206°F
<b>CPD 3640A/3875B</b>	100A : 21B	60-70 min	180°F	30 minutes	500 cP	206°F

## Facility Services

We formulate and manufacture our products in-house 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 snap-cure, if you do not see exactly what you are looking for please call us and we can help you find something in our vast library of product formulas. You can trust our products and support 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.



info@epoxi.com

Phone: 1.800.755.8568

Fax: 651.451.9728

275 Bridge Point Way  
South St. Paul, MN 55075

