



# 2134A RESIN 4307B HARDENER

350°F EPOXY RESIN SYSTEM FOR INFUSION AND INJECTION  
TECHNICAL DATA BULLETIN

## SYSTEM BENEFITS:

CPD 2134A Resin with CPD 4307B Hardener is an unfilled epoxy RTM system with an extra long pot life, designed for use where temperatures may reach 350°F. The system requires elevated temperature to infuse the resin into the mold and requires a post cure to achieve maximum properties. The low viscosity at elevated temperatures and the reactionary chemistry assures maximum wet-out of fiberglass, carbon fiber and Kevlar®.

- High temp infusion
- Extra long gel time
- Post cure required

## HANDLING PROPERTIES

	CPD 4307B	Test Method
Resin Viscosity at 77°F, cP	7,500	ASTM D2196
Hardener Viscosity at 77°F, cP	200	ASTM D2196
Mix Ratio by Weight	100A : 90B	Calculated
Initial Mixed Viscosity 77°F, cP	1,800	ASTM D2196
Initial Mixed Viscosity 100°F, cP	860	ASTM D2196
Initial Mixed Viscosity 120°F, cP	380	ASTM D2196
Initial Mixed Viscosity 160°F, cP	225	ASTM D2196
Mixed Viscosity 120°F, 2 hours cP	410	ASTM D2196
Mixed Viscosity 120°F, 4 hours cP	450	ASTM D2196
Mixed Viscosity 120°F, 6 hours cP	520	ASTM D2196
Pot Life at 77°F, hours	24	ASTM D2471
Pot Life at 120°F, hours	6	ASTM D2471
Gel Time at 160°F, hours	4	ASTM D2471
Gel Time at 200°F, minutes	60	ASTM D2471

## PHYSICAL PROPERTIES

	CPD 4307B	Test Method
Color	Dark Amber	Visual
Izod Impact, Notched, ft-lb/in	1.01	ASTM D256
Tensile Strength, psi	12,200	ASTM D638
Tensile Modulus, psi	472,000	ASTM D638
Tensile Elongation, %	2.3	ASTM D638
HDT, Post Cure, °F	385	ASTM D648
Compressive Strength, psi	21,300	ASTM D695
Flexural Strength, psi	17,900	ASTM D790
Flexural Modulus, psi	488,000	ASTM D790
Hardness, Shore D	90	ASTM D2240
Linear Shrinkage, in/in	<0.002	ASTM D2566



## SYSTEM POST CURE OPTIONS:

Select one of the following cure schedules depending on the available time, the physical properties of the mold and the desired physical properties of the final part. Post cure the part to obtain maximum physical and thermal properties of the system. The recommended post cure temperature ramp rate between stages is up 5°F per minute for heating and down 1-2°F per minute for cooling. Heating and cooling ramp rates can vary based on size and thickness of the part. For larger thicker parts use a more conservative ramp. If you need to deviate from the recommended post cure schedule, please contact our technical service department.

## CURE INCREMENTS:

CPD 4307B	6-8 Hours at 160°F (71°C)	2-4 Hours at 200°F (93°C)	2 Hours at 250°F (121°C)	6 Hours at 300°F (149°C)	4 Hours at 350°F (177°C)
Gel Option 1	Supported				
Gel Option 2		Supported			
Post Cure Option 1			Unsupported	Unsupported	Unsupported
Post Cure Option 2				Supported	Supported

## MIXING AND SURFACE PREP:

Always use the recommended mix ratio for the system. Do not deviate in an attempt to speed up or slow down gel time. Mix together thoroughly, scraping sides and bottom of mixing container, until no streaks or striations are visible, then use immediately. Use only clean dry tools for mixing and applying. Do not mix or apply below 60°F. All surfaces must be clean, dry, and free of any surface contamination. Molds and patterns should be treated with release or parting agents.

## STORAGE AND CRYSTALLIZATION:

Store between 60-90°F in a dry place. After use, tightly reseal all containers and store products on a raised surface during cold weather and avoid storing near outside walls or doors. If available, Purge with dry nitrogen to preserve color and minimize moisture contamination. Do not allow to freeze during winter storage. Do not use material with any signs of crystallization such as solid chunks, grainy texture or white color. Crystallization can be reversed by heating the material to 125-140°F, and stirring occasionally, until all crystals dissolve.

## SAFETY HANDLING:

Wear protective gloves, clothing, and eye/face protection. Use only outdoors or in a well-ventilated area. Avoid contact to the skin and eyes. Avoid breathing dust, fumes, gas mist, vapors and spray. Wash hands thoroughly after handling. Take off contaminated clothing and wash before reuse. These products may cause skin and respiratory allergic reactions. Consult product Safety Data Sheets for complete precautions for use of this product.

Polytek Development Corp. has experience only in the compounding of resins and hardeners and not in the actual manufacture of tools or parts. Each piece is different. The user should run tests to assure the suitability of the system for use in a particular application. The test data and results set forth herein are based on laboratory work and do not necessarily indicate the results that the buyer or user will attain.

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