2128A RESIN
4302B HARDENER

EPOXY RESIN SYSTEM FOR HAND LAY-UP

TECHNICAL DATA BULLETIN

SYSTEM BENEFITS:

CPD 2128A Resin with CPD 4302B Hardener is an anhydride cured, elevated temperature setting, medium service temperature, epoxy compound that may be used in many diverse applications such as bonding, casting and laminating. The low viscosity at elevated temperatures and the reactionary chemistry assure maximum wet-out of fiberglass, carbon fiber and Kevlar®. A post cure is required to achieve maximum properties.

- Laminating
- Elevated temp gel
- Anhydride cured

HANDLING PROPERTIES	CPD 4302B	Test Method
Resin Density at 25°C, lbs/gal	9.7	ASTM D1475
Hardener Density at 25°C, lbs/gal	10.0	ASTM D1475
Resin Viscosity at 25°C, cP	12,500	ASTM D2196
Hardener Viscosity at 25°C, cP	110	ASTM D2196
Mix Ratio by Weight	100A : 102B	Calculated
Mix Ratio by Volume	1A : 1B	Calculated
Initial Mixed Viscosity 25°C, cP	2,000	ASTM D2196
Gel Time at 85°C, 150g mass, min.	30	ASTM D2471

PHYSICAL PROPERTIES	CPD 4302B	Test Method
Color	Amber	Visual
Izod Impact, Notched, ft-lb/in	0.69	ASTM D256
Tensile Strength, psi	9,200	ASTM D638
Tensile Elongation, %	5.1	ASTM D638
HDT, Post Cure, °F	260	ASTM D648
Compressive Strength, psi	15,400	ASTM D695
Flexural Strength, psi	6,000	ASTM D790
Flexural Modulus, psi	454,000	ASTM D790
Cured Density, g/cm^3 (lbs/in^3)	1.21 (0.044)	ASTM D792
Volumetric Yield, in^3/lb	22.9	ASTM D792
Volumetric Shrinkage, %	2.5	ASTM D792/2196
Hardness, Shore D	87	ASTM D2240

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 4302B	2 Hours at 185°F (85°C)	8 Hours at 230°F (110°C)	4 Hours at 250°F (121°C)
Post Cure 1	Supported	Unsupported	
Post Cure 2	Supported		Unsupported

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.

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