



820 MARINE EPOXY LAMINATING SYSTEMS

PRODUCT BULLETIN



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DESCRIPTION

The **820 Epoxy Laminating Systems** are 100% solids systems developed for the fabrication and repair of high performance composite structures. The **820 Epoxy Laminating Systems** consist of one resin and a selection of three separate hardeners to suit your building or repair needs. The resin and hardener combinations produce low viscosity mixtures with convenient volumetric mix ratios. In addition, the **820 Epoxy Laminating Systems** are specially formulated for standard wet lay-up or resin-infusion operations requiring the highest degree of fabric wetting and air release attributes. The systems are specifically engineered to promote a high fiber-to-resin ratio and a greater interface with composite fabric(s), thereby resulting in lighter, stronger parts offering lower maintenance and long-term performance.

BENEFITS

- High Fiber-to-Resin Ratio
- 100% Solids-No Solvents
- Use in Wet Lay-up, Vacuum Bagging, Resin Infusion Operations
- Specifically Formulated For Use With E-Glass, S-Glass, Kevlar and Graphite Fabrics
- Above or Below Water Line Applications
- Produce Lighter and Stronger Parts
- Complete Wet Out and Air Release
- Save money-Less Resin Usage
- UV Stabilized

The **820 Epoxy Laminating Systems** include an **820 Resin** and your choice of **Hardener**:

820 Resin - Is a low viscosity resin specifically formulated for use with the following selection of hardeners to produce the highest quality laminating systems:

Work Life

822 Hardener	30 minutes
823 Hardener	45 minutes
824 Hardener	60 minutes

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HANDLING CHARACTERISTICS @ 25°C/77°F				
Test	Test Method	820/822	820/823	820/824
Mix Ratio	By Weight	100R:18H	100R:18H	100R:18H
Mix Ratio	By Volume	5R:1H	5R:1H	5R:1H
Mixed Viscosity	Brookfield	650 cps	350 cps	425 cps
Pot Life	Minutes	25-30	40-45	50-60
Mixed Density	lbs/gal	9.2	9.2	9.13
Mixed Density	lbs/in ³	0.04	0.04	0.04
Specific Gravity	gm/cc	1.10	1.10	1.09
Demold Time	Hours	24	24	24
V.O.C.	g/L	0.0	0.0	0.0
Color		Pale Amber	Pale Amber	Pale Amber
Minimum Cure Schedule	Hours	24	24	24
Complete Cure Schedule	Days	7	7	7
Shelf Life / D.O.M.		2 years	2 years	2 years
Tensile Strength	ASTM D-638.946	25,514 psi	24,700 psi	45,000 psi
*Tensile Elongation	ASTM D-638.946	1.84%	2.80%	2.0%
Tensile Modulus	ASTM D-638.946	1,950,000 psi	1,930,000 psi	3,000,000 psi
Flexural Strength	ASTM D-790.92	26,250 psi	28,522 psi	45,000 psi
Flexural Modulus	ASTM D-790.92	1,840,000 psi	1,650,000 psi	2,200,000 psi
*Compressive Strength	ASTM D-695.91	8,343 psi	8,100 psi	8,400 psi
*Compressive Modulus	ASTM D-695.91	170,280 psi	154,240 psi	160,000 psi
*Impact Strength	ASTM D-256.93a	5.52 (in-lbf/in)	4.50 (in-lbf/in)	3.75 (in-lbf/in)
*HDT @ 66 PSI	ASTM D-648.82	82°C/180°F	82°C/180°F	72°C/161°F
*Average Moisture Absorption	ASTM D-570.81	0.17%	0.21%	0.25%

* Testing conducted on neat resin only
HDT testing conducted on neat resin samples post cured 4 hours at 65°C/150°F

820 Tech/Revised 5/20/10
Supersedes 3/30/07

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