



**EL-345  
LAMINATING SERIES  
FOR  
HIGH PERFORMANCE  
COMPOSITES**



**www.CASSpolymers.com  
31200 Stephenson Hwy**

**800.344.7776  
Madison Heights MI 48071**

**ADTECH@CASSpolymers.com  
Ph 248.588.2270 Fax 248.588.5909**

**DESCRIPTION**

**ADTECH EL-345 Resin Series** is a 100% solids, high temperature, UV resistant epoxy laminating system developed for high performance composite applications. This series gives the user a choice of three hardeners which will depend on the size of the part and the working time needed. Composites laminated with **EL-345 resin/hardeners** will exhibit increased impact resistance and high temperature stability. Used for laminating with graphite, E-Glass, S-Glass and Kevlar fabrics. The handling properties are designed for use in laminating, vacuum bagging, and oven cure production processes.

**HANDLING CHARACTERISTICS @ 25°C/77°F**

	<b><u>EL-345R/EL-345-1</u></b>	<b><u>EL-345R/EL-345-2</u></b>	<b><u>EL-345R/EL-345-3</u></b>
Mix Ratio (parts-by-weight) .....	100R/38H .....	100R/38H .....	100R/30H
Mixed Density .....	1.10 gms/cc .....	1.10 gms/cc .....	1.11 gms/cc
.....	9.2 lbs/gallon .....	9.2 lbs/gallon .....	9.3 lbs/gallon
Mixed Viscosity .....	1,080 cps .....	1,300 cps .....	1,060 cps
Work Life (200 gram mass) .....	44 minutes .....	117 minutes .....	220 minutes
Complete Cure .....	Reference heat cure schedule on page 2		
Mixed Color Resin and all Hardeners .....	Clear/Light Amber		
Shelf Life Resin and all Hardeners .....	2 years		

**TYPICAL PHYSICAL PROPERTIES (After Heat Cure)**

	<b><u>EL-345R/EL-345-1</u></b>	<b><u>EL-345R/EL-345-2</u></b>	<b><u>EL-345R/EL-345-3</u></b>
Tensile Strength (6 ply laminate) .....	28,200 psi .....	28,940 psi .....	29,820 psi
(cast bar) .....	8,366 psi .....	10,100 psi .....	12,420 psi
Tensile Elongation (6 ply laminate) .....	2.16% .....	2.0% .....	2.1%
(cast bar) .....	2.5% .....	3.4% .....	5.5%
Flexural Strength (6 ply laminate) .....	30,760 psi .....	33,950 psi .....	27,240 psi
(cast bar) .....	14,050 psi .....	18,290 psi .....	18,980 psi
Flexural Modulus (6 ply laminate) .....	2,262,000 psi .....	2,014,000 psi .....	1,766,000 psi
(cast bar) .....	406,900 psi .....	414,200 psi .....	458,700 psi
Compressive Strength (cast bar) .....	14,710 psi .....	16,070 psi .....	16,150 psi
Cured Hardness (cast bar) .....	85 Shore-D .....	85 Shore-D .....	86 Shore-D
Impact Strength (cast bar) .....	12.95 (in-lbf/in) .....	9.05 (in-lbf/in) .....	5.28 (in-lbf/in)
Heat Deflection Temp @ 66 psi (cast bar) .....	97°C/207°F .....	98°C/209°F .....	89°C/193°F
Heat Deflection Temp @ 264 psi (cast bar) .....	92°C/197°F .....	91°C/195°F .....	83°C/182°F

**CURE SCHEDULE**

24 hours @ 25°C/77°F  
+ 2 hours at 100°C/212°F

**HEATING AND COOLING RATES DURING POST CURE**

When heat curing composite parts, always place the mold in a room temperature oven increasing the temperature at a rate of no more than 13°C/25°F per hour. When finished, allow molds to remain in the heated oven, decreasing the temperature at a rate of no more than 27°C/50°F per hour. Never remove the mold or parts from the oven until temperature has been lowered to less than 38°C/100°F. Removing a mold or parts from an oven heated above 38°C/100°F can result in thermal shock and warpage of the part or mold.

EL-345 Tech/New 5/10/06  
Supercedes EO8-064, EO8-065 and EO8-067 / 12/15/05



Seller cannot anticipate all conditions under which seller's products, or the products of other manufacturers in combination with seller's products, may be used. Seller accepts no responsibility for results obtained by the application of seller's products or the safety and suitability of seller's products, either alone or in combination with other products. Users are advised to make their own test to determine the safety and suitability of each such product or product combination for their own purposes. Unless otherwise agreed in writing, seller delivers the products without warranty of any nature, stated or implied, and buyers and users assume all responsibility and liability for loss or damage arising from the handling and use of said products, whether used alone or in combination with other products. Purchaser waives any claim against seller for direct, indirect, consequential or exemplary damages against seller, including without limitation, damage which may incur as a result of purchaser's use or misuse of the product or the products failure to conform to any particular specifications.