

Product Bulletin

CASS POLYMERS

ADTECH
Plastic Systems
SC-9001 Registered



Phone: 800 344 7776
Fax: 248 588 5909
815 West Shepherd Street
Charlotte, MI 48813-0523
plastic@casspolymers.com
www.casspolymers.com

EL-318
LAMINATING RESIN
ROOM-TEMP FIRE RETARDANT
UNFILLED

0302

DESCRIPTION

EL-318 is an unfilled, flame retardant wet lay-up epoxy system developed for use in fabricating parts or repairs on structures which require flame retardant, self-extinguishing characteristics with room-temp curing capabilities. Tests have shown EL-318 to comply with FAR 25.853 (a) of the Federal Aviation Standards for aircraft interiors and other areas where fire retardancy is of concern. The low viscosity allows for excellent cloth wet-out and penetration. The system is formulated to comply with OSHA safety standards for employee handling and plant usage. EL-318 has a moderate (20-30 min) work life. The system is recommended for fabrication replacement and repair of laminated production parts used in commercial aviation, transportation and many other applications.

HANDLING CHARACTERISTICS @ 25°C/77°F

Mix ratio (parts by weight)	100R/10H
(parts by volume)	7.8R/1H
Density (Mixed)	10.95 lbs/gal
.....	0.045 lbs/cu in
Specific Gravity	1.25 gms/cc
Mixed Viscosity	2,000-3,000 cps
Work Life (220 gm mass)	20-30 minutes
Demold Time	16-24 hours
Complete Cure	3-5 days
Color Resin - Amber	Hardener
- Amber	
Mixed - Amber	
Shelf Life (Storage at ambient temperature).....	1 Year

PHYSICAL PROPERTIES

6 Layer, 10 Ounce Glass Fabric Laminate:

Ultimate Tensile Strength	30,490 psi
Tensile Modulus	2.21 X 10 ⁶ psi
Ultimate Flexural Strength	34,710 psi
Flexural Modulus	1.52 X 10 ⁶ psi

CAST BAR

Ultimate Compressive Strength.....	10,820 psi
Impact Strength (Notched Izod)	3.56 in lbs
Hardness	82-85 Shore D
Coefficient of Thermal Expansion	7.23 X 10 ⁻⁵ in/in/°F
Tensile Elongation	4.662%

Continued on Back

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 APPLICATIONS 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 OCCUR AS A RESULT OF PURCHASER'S USE OR MISUSE OF THE PRODUCT OR THE PRODUCT'S FAILURE TO CONFORM TO ANY PARTICULAR SPECIFICATIONS.

FLAMMABILITY TESTS: (6 ply laminate with 1800 style fiberglass cloth)

1. 90° Vertical Test Method:

Burn Time:	60 seconds
Extinguishing Time:	0 seconds
Burn Length:	2.5 inch
Afterglow:	0 seconds
Drip Extinguish Time:	0 seconds

2. 45° Angle Test Method:

Burn Time:	30 seconds
Extinguishing Time:	0 seconds
Burn Length:	1.6 inch
Afterglow:	0 seconds
Drip Extinguish Time:	0 seconds