

Product Bulletin

CASS POLYMERS

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EL-323-TC
EPOXY COMPOSITE
TOOLING COMPOUND
QUICK CURE/DEMOLD 12-16 HOURS

0302

DESCRIPTION

ADTECH's versatile "Composite Tooling Compound" is a new and improved material for the construction of tools, jigs, models and other tooling requirements. The system saves a considerable amount of time and labor. EL-323-TC has a convenient mix ratio (1:1 by volume). Mix the blue resin and the yellow hardener into a light green compound. This insures thorough mixing and eliminates any possibilities of "hot spots" in the tool. The system when mixed is a very pliable elastic compound which can be applied to the tool surface without crumbling or cracking. EL-323-TC can also be applied at any thickness above ¼" without excessive exotherm.

Tools constructed with Composite Tooling Compound maintain a very high degree of dimensional stability, are light in weight, and can be machined as well as drilled and tapped. All of these qualities allow the system to be used in a variety of tooling applications.

EL-323-TC also offers the toolmaker a safer alternative to standard epoxy laminates since both resin and hardener are syntactic which eliminates splash hazards. Clean up is easy with soap and water. Composite Tooling Compound does not contain any corrosive or noxious aromatic amines; the system is both useful and non-toxic.

APPLICATION

NOTE: The following are two suggested construction applications which may vary from user to user.

NO. 1 FOR TEMPORARY TOOL - Apply any ADTECH Epoxy Surface Coat System to prepared model. Allow first coat to tack. Prepare EL-323-TC compound. Apply second coat of Surface Coat and apply mixed rolled and cut sections of EL-323-TC onto second Surface Coat and press into place. Allow to cure and remove.

NO. 2 FOR PERMANENT TOOL - Apply any ADTECH Epoxy Surface Coat System to prepared model. Allow to tack. Apply any ADTECH Epoxy Laminating System to Surface Coat. Laminate 3 layers standard 10 oz. tooling cloth. Prepare a quantity of ADTECH ELB-338 Epoxy Tooling Bond Coat (see Bond Coat Procedure Form A: 323 RMT). Brush this bond coat onto the laminate (this helps to ensure an air free tool). Prepare EL-323-TC compound. Roll out to desired thickness, allow EL-323-TC to firm up (approx. 2½-3 hours) and proceed to brush laminating epoxy over entire EL-323-TC compound. Apply 3 additional layers of 10 oz. tooling cloth and laminating epoxy thereby forming a sandwich construction. Allow to cure and remove.

Laminating can be applied to cured EL-323-TC with absolute rebond strength.

Additional specific application bulletins available upon request.

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HANDLING CHARACTERISTICS @ 25°C/77°F

Mix Ratio (parts by volume)	1R/1H
Density (Mixed)	5.3 lbs/gal
	0.0220 lb/cu in
Specific Gravity (Mixed)	0.611 gms/cc
Mixed Viscosity	Syntactic
Work Life (400 gm mass)	2-2.5 hours
Demold Time	12-16 hours
Complete Cure	3 days
Peak Exotherm (1 lb)	105°F
Color Resin - Blue Hardener - Yellow	Mixed - Green
Storage Life (Storage at ambient temperature with containers tightly closed)	1 year

PHYSICAL PROPERTIES

TEST SAMPLE: A SANDWICH CONSTRUCTION WITH THREE LAYERS OF 10 OUNCE GLASS FABRIC LAMINATE ON EITHER SIDE OF 1/2" OF EL-323-TC, AND A SINGLE SURFACE COAT

Ultimate Flexural Strength	13,050 psi
Flexural Modulus	1.027 x 10 ⁶ psi
Ultimate Compressive Strength	6,144 psi
Impact Strength (Notched Izod)	20.9 in-lbs

CAST BAR

Hardness	60 Shore D
Coefficient of Thermal Expansion	3.2 x 10 ⁻⁶ in/in°F

DOES NOT CONTAIN ASBESTOS, MDA, VCHD, OR AROMATIC AMINES.