



EL-323 TC  
COMPOSITE  
TOOLING COMPOUND



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**DESCRIPTION**

EL-323 TC 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. This system is both useful and non-toxic.

**TYPICAL HANDLING CHARACTERISTICS @ 77°F (25°C)**

Mix Ratio (parts by volume).....	1R/1H
Mix Ratio (parts by weight).....	100R:93H
Specific Gravity (mixed).....	0.689 g/cc
Mixed Viscosity.....	Syntactic Dough
Work Life (400 gram mass).....	2-2.5 hours
Demold Time.....	12-16 hours
Complete Cure.....	3 days
Peak Exotherm (1 lb mass).....	105°F (41°C)
Mixed Color.....	Green
Shelf Life Resin & Hardener (in original unopened container).....	1 year

**TYPICAL PHYSICAL PROPERTIES**

**Test Sample:** Sandwich construction with three layers of 10 oz glass fabric laminate on either side of ½" of EL-323 TC, and a single surface coat.

Ultimate Flexural Strength.....	13,050psi (90MPa)
Flexural Modulus.....	1,027,000psi (7,081MPa)
Ultimate Compressive Strength.....	6,144psi (42MPa)
Notched Izod Impact Strength.....	20.9 in-lbs

**Cast Bar:**

Hardness.....	60 Shore D
Coefficient of Thermal Expansion (ppm/°F (°C)).....	3 (6)

Note: it will be necessary to apply a slurry mixture to be used as a bond coat between the laminate and EL-323TC Tooling Compound.. A slurry mixture is a 50/50 by volume mixture of pre-mixed EL302PC laminating resin and EL-323 TC. This slurry helps to insure the strongest bond between laminate and EL-323 TC and alignment bushings. The 50/50 mixture is adjustable at the toolmakers discretion with no thickness limitations and no thinner than 60 parts laminating resin to 40 parts EL-323 TC (a product application guide is available for EL-323TC tooling compound).

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