



EL-323 TC
COMPOSITE
TOOLING COMPOUND



www.axson-technologies.com
31200 Stephenson Hwy

800.344.7776
Madison Heights, MI 48071

axsonmh@axson.com
Ph 248.588.2270 Fax 248.588.5909

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 1/4" 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 1/2" 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).

EL-323 TC Tech/Revised 1/7/15
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AXSON TECHNOLOGIES US +1 248 588 2270 axsonmh@axson.com axson-na.com	CHINA +86 21 58 68 30 37 marketing.china@axson.com	GERMANY +49 6 07 44 07 11-0 verkauf@axson.com	INDIA +91 20 25 56 07 10-11 info.india@axson.com	ITALY +39 02 96 70 23 36 axson@axson.it	JAPAN +81 5 64 26 25 91 sales.japan@axson.com	FRANCE Global Headquarters +33 1 34 40 34 60 axson@axson.com axson-technologies.com
	MEXICO +52 55 52 64 49 22 marketing@axson.com.mx	MIDDLE EAST +971 7 2432227 axsonmideast@axson.com	SLOVAKIA +42 1 76 42 25 26 axson.sk@axson.com	SPAIN +34 9 32 25 16 20 spain@axson.com	U.K. +44 16 38 66 00 62 sales.uk@axson.com	