

PRODUCT DATA SHEET

SikaBiresin® L323 (Formerly EL-323TC)

Lightweight Composite Tooling Compound/Tooling Dough

TYPICAL PHYSICAL PROPERTIES (FOR FURTHER VALUES SEE SAFETY DATA SHEET)

Properties	SikaBiresin® L323 (A) Resin	SikaBiresin® L323 (B) Hardener
Composition	Epoxy	Amine
Mix ratio	by weight 100	100
	by volume 100	93
Aspect	Dough	Dough
Color	Yellow	Blue
Color (mixed)	Green	
Density at 77°F (25°C) (mixed)	.025 lbs/in ³ (.690 g/cc)	
Work life (400g) at 77°F (25°C)	2.0 - 2.5 hours	
Peak Exotherm (1 lb. mass)	105°F (41°C)	

DESCRIPTION

SikaBiresin® L323 is an epoxy-based, composite tooling compound designed for the construction of tools, jigs, models, sandwich structures and other tooling or modeling applications. When mixed the system results in a very pliable elastic compound which can be applied to the tool surface without crumbling or cracking. SikaBiresin® L323 can be applied at any thickness above ¼" without excessive exotherm. Tools constructed with SikaBiresin® L323 maintain a very high degree of dimensional stability, are light in weight, and can be machined as well as drilled and tapped. The SikaBiresin® L323 resin and hardener are both syntactic dough compounds, which minimize splash hazards, in comparison to standard, room temperature epoxy laminating systems.

PRODUCT BENEFITS

- Colored resin and hardener for mix indication
- Pliable and formable with no cracking or crumbling when mixed
- Can be machined or drilled and tapped
- Low density (lightweight)
- Very low coefficient of thermal expansion (CTE) for excellent dimensional stability
- Low exotherm build

AREAS OF APPLICATION

SikaBiresin® L323 is ideal for lightweight composite sandwich tools and structures. It is used for tools, jigs, fixtures, models, and other application types. SikaBiresin® L323 can also be used for artistic formable models.

Tests with actual materials and conditions have to be performed to ensure satisfactory performance.

TYPICAL MECHANICAL AND THERMAL PROPERTIES

Properties, Test Method	SikaBiresin® L323 (A) Resin	SikaBiresin® L323 (B) Hardener
Hardness, Shore D ASTM D2240	60	
Volumetric weight	.025 lbs/in ³ (.690 g/cc)	
Flexural strength, ASTM D790 ^A	13,050 psi (90 MPa)	
Flexural modulus, ASTM D790 ^A	1,027,000 psi (7,081 MPa)	
Compressive Strength, ASTM D695 ^A	6,144 psi (42 Mpa)	
Notched Izod Impact Strength, ASTM D256 ^A	20.9 In-lbs	
Coefficient of thermal expansion (TMA)	3 ppm/°F (6 ppm/°C)	

^(A) Sandwich construction with three layers of 10 oz glass fabric laminate on either side of ½" of SikaBiresin® L323, and a single surface coat
Cure schedule: Cured 7 days at room temperature.

PROCESSING

For sandwich structure tools, it is necessary to apply a slurry mixture, which serves as a bond coat, between the laminate and SikaBiresin® L323 tooling compound. For more detailed instructions, please reference the Composite Sandwich Tool Construction Application Guide.

Normal health and safety precautions should be observed when handling these products:

- Ensure adequate ventilation
- Wear gloves, glasses, and protective clothes

For further information, please consult the Safety Data Sheets

STORAGE CONDITIONS

Shelf life of resin and hardener is 12 months when stored in original, unopened containers between 65-77°F (15 - 25°C). Any opened can must be tightly closed.

PACKAGING INFORMATION

Packaging information is available upon request. Please contact your local Sika sales representative.

FURTHER INFORMATION

Advice on specific applications will be given on

request. To contact Sika Corporation's Industry Technical Services Department, send an email to tsmh@us.sika.com. Copies of Safety Data Sheets and Product Data Sheets are available upon request.

BASIS OF PRODUCT DATA

All technical data stated in this document are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

ENVIRONMENTAL, HEALTH AND SAFETY

For further information and advice regarding transportation, handling, storage and disposal of chemical products, user should refer to the actual Safety Data Sheets containing physical, environmental, toxicological and other safety related data. User must read the current actual Safety Data Sheets before using any products. In case of an emergency, call CHEMTREC at 1-800-424-9300, International 703-527-3887.

LEGAL DISCLAIMER

Prior to each use of any product of Sika Corporation, its subsidiaries or affiliates ("SIKA"), the user must always read and follow the warnings and instructions on the product's most current product

label, Product Data Sheet and Safety Data Sheet which are available at usa.sika.com or by contacting SIKA's Technical Service Department via email at tsmh@us.sika.com. Nothing contained in any SIKA literature or materials relieves the user of the obligation to read and follow the warnings and instructions for each SIKA product as set forth in the current product label, Product Data Sheet and Safety Data Sheet prior to use of the SIKA product. SIKA warrants this product for one year from date of installation to be free from manufacturing defects and to meet the technical properties on the current Product Data Sheet if used as directed within the product's shelf life. User determines suitability of product for intended use and assumes all risks. User's and/or buyer's sole remedy shall be limited to the purchase price or replacement of this product exclusive of any labor costs. **NO OTHER WARRANTIES EXPRESS OR IMPLIED SHALL APPLY INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. SIKA SHALL NOT BE LIABLE UNDER ANY LEGAL THEORY FOR SPECIAL OR CONSEQUENTIAL DAMAGES. SIKA SHALL NOT BE RESPONSIBLE FOR THE USE OF THIS PRODUCT IN A MANNER TO INFRINGE ON ANY PATENT OR ANY OTHER INTELLECTUAL PROPERTY RIGHTS HELD BY OTHERS.** Sale of SIKA products are subject to the Terms and Conditions of Sale which are available at <https://usa.sika.com/en/group/SikaCorp/termsandconditions.html> or by calling +1 800-933-7452.