

PRODUCT DATA SHEET

SikaBiresin® CR128 (Formerly EL-336)

Unfilled Epoxy Laminating System for High Temperature Applications

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

Properties	SikaBiresin® CR128 (A) Resin	SikaBiresin® CH128-2 (B) Hardener	SikaBiresin® CH128-4 (B) Hardener
Composition	Epoxy	Amine	Amine
Mix ratio – by weight	100	22	27
Aspect	Clear liquid	Clear liquid	Clear liquid
Color (mixed)	n/a	Clear	Clear amber
Viscosity – Brookfield (mixed)	n/a	2,000 - 3,000 cps	1,400 cps – 1,600
Density at 77°F (25°C) (mixed)	n/a	9.51 lbs./gal	n/a
Pot life (228g) at 77°F (25°C)	n/a	35 - 50 Minutes	120 – 140 Minutes

DESCRIPTION

SikaBiresin® CR128 is an unfilled, non-staining, epoxy laminating system that provides room temperature hardening (B Stage) and is designed for high temperature laminating and tooling applications. SikaBiresin® CR128 has excellent handling properties and fabric wet-out to produce a void free tool with high dimensional stability. SikaBiresin® CR128 is available with a choice of two hardener options with different pot lives for process flexibility. Tools made with SikaBiresin® CR128 can be used at continuous temperatures of 230°F (110°C) and up to a 250°F (121°C) intermittent use maximums. While SikaBiresin® CR128 will gel at room temperature, it must be post-cured to achieve ultimate strength.

PRODUCT BENEFITS

- For applications up to 250°F (121°C)
- High mechanical properties
- Two hardener choices (fast and slow)
- Excellent cloth wet-out
- Excellent dimensional stability
- Good handling properties

AREAS OF APPLICATION

Typical applications include vacuum form molds, prototype injection molds, high temperature bonding fixtures, spray metal molds, compression molds, high temperature laminating molds and parts for intermediate to high temperature applications

SikaBiresin® CR128 can be used with Sika’s high temperature surface coats SP-707, ES-221, or ES-224.

TYPICAL MECHANICAL AND THERMAL PROPERTIES (NEAT FORM)

Properties, Test Method	Mixed with SikaBiresin® CR128 (A) Resin	
	SikaBiresin® CH128-2 (B) Hardener	SikaBiresin® CH128-4 (B) Hardener
Shore D hardness, ASTM D2240	88	88
Compressive strength, ASTM D695	13,390 psi (92 MPa)	15,910 psi (110 MPa)
Tensile elongation, ASTM D638	3.0%	n/a
Heat Distortion Temperature (HDT) (66 psi) (264 psi)	n/a n/a	278° F (137° C) 263° F (128° C)
Coefficient of Thermal Expansion (CTE) - TMA	30 ppm/° F (54 ppm/° C)	n/a
Notched Impact strength, ASTM D256	7.0 in-lbf/in	n/a

Cured 24 hours at 77°F (25°C) + 2 hours at 150°F (66°C) + 2 hours at 200°F (93°C) + 2 hours at 250°F (121°C) + 3 hours at 300°F (149°C).

PROCESSING

Preliminary self-support cure schedule: Cure for 24 hours at 77°F (25°C) + 4 hours at 125°F (51.6°C) - 140°F (60°C). You may attach support structure and demold tool after this schedule is completed before additional cure is given.

Alternative post-cure options can be used, if needed, in processing. Contact Sika Corporation's Industry Technical Services Department at tsmh@us.sika.com for additional information and advice.

Heating and cooling rates during post-cure: Always allow tools made with Sika® high temperature systems to gel at room temperature before subjecting them to post cure (24 hours is usually sufficient). This will prevent excessive exotherm and shrink stress from occurring. When oven curing laminated molds, always place mold in a room temperature oven and increase temperature at a rate of no more than 50°F (30°C) per hour. When heat cure is completed, turn off oven and allow molds to remain in the oven. Never remove mold from oven until mold temperature has been lowered to less than 100°F (38°C).

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 hardeners is 24 months when stored in original, unopened containers between 65-77°F (15 - 25°C). Keep containers 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.