



SIKA HIGH TEMPERATURE EPOXY TOOLING SYSTEMS

▶ We are excited to introduce **Sika High Temperature Epoxy Tooling Systems** to our product line. These systems were developed to meet the requirements of the aircraft and aerospace industry for applications that demand higher temperature resistance greater than 350°F (177°C). Thermo-cycling of these systems exhibit a great degree of high physical stability when used in tooling and composite fabrication. These systems utilize different catalysts, giving you the work time and temperature resistance needed for your project.

Specifications

	Mix Ratio (by wt.) Resin:Hardener	Mix Ratio (by vol.) Resin:Hardener	Gel Time (min.) @ 72°F	Demold Time (hr.) @ 72°F	Hardness (Shore D)	Mixed Viscosity (cps)	Density (g/cc)	Volumetric Yield (in. ³ /lb.)	Shrink (in./in.)	Compressive Strength (psi)	Flexural Strength (psi)	Flexural Modulus (psi)	Tensile Strength (psi)	Deflection Temp. (°F)	Color
Sika ES-215-1	100:18	100:15	16	-	89	60,000	1.31	-	-	21,700	8,108	-	7,101	277	Black
Sika ES-215-1	100:22	4.4:1	83	-	88	38,000	1.23	-	-	20,820	9,253	-	3,593	288	Black
Sika ES-215-IHG	100:17	4.8:1	180-220	-	89	125,000	1.23	-	-	21,690	8,416	-	4,938	368	Black
SikaBiresin CH163-1	100:19	-	50-60	-	90	2,500	1.09	25.3	0.0015	-	90,480	4,642	62,630	306	Amber
SikaBiresin CH163-2	100:25	-	50-75	-	88	3,500	1.18	23.4	0.0036	-	44,540	2,296	33,690	320	Amber
SikaBiresin CH163-6	100:24	-	180-210	-	90	4,500	1.14	24.2	0.0015	-	76,200	3,504	56,090	389	Black
SikaBiresin L325 HT	100:25	3.7:1	90-120	24	65-70	Dough-like	0.633	43.7	-	4,900	9,600	-	-	425	Black
ASTM	-	-	D-2471	-	D-2240	D-2393	D-792	D-792	D-2566	D-695	D-790	D-790	D-638	D-648	-

Sika ES-215 Surface Coat

- ▶ Graphite filled
- ▶ Gray
- ▶ 3 options for gel time

Sika ES-215 Series is a high-temperature, graphite-filled epoxy surface coat. This system was developed for the aerospace industry where

demands for heat resistance greater than 350°F is necessary. Three different hardener options are available to meet the demand of your project. This product does not contain MDA or VCHD.

SikaBiresin CR163 Laminating Resin

- ▶ 55, 60, or 195 min. gel time
- ▶ 88 or 90 Shore D
- ▶ Amber or Black

SikaBiresin® CR163 (formerly known as Sika EL-315) is a very stable, high-temperature epoxy laminating system, offering Tg up to 450°F. This material

is available with a choice of three different hardeners (CH163-1, CH163-2, and CH163-6) to allow adequate construction and bagging time on large and small tools.

SikaBiresin L325 HT High-Temperature Tooling Dough

- ▶ 90-120 min. gel time
- ▶ 65-70 Shore D Hardness
- ▶ HDT 425°F

SikaBiresin® L325 HT High-Temperature Tooling Compound was designed for the construction of tools, jigs, models, and other tooling that

will see elevated temperatures. The use of SikaBiresin L325 HT saves a considerable amount of time in high-temperature tool construction.

For part numbers, technical documents, and ordering, visit our website at www.FreemanSupply.com.



Join Freeman 360° today! Use your Customer Number to create an online account on FreemanSupply.com!

Your Freeman Customer Number can be found on any invoice.



ABOUT FREEMAN MANUFACTURING & SUPPLY CO.

Freeman is North America's extensive composites manufacturing materials supplier offering a comprehensive selection of fiberglass and carbon fabric, resins, releases, vacuum-bagging materials, and high-temperature tooling boards. Freeman's 13 locations across North America and dedicated technical team allows for high-quality products and service.

BRANCH LOCATIONS & PUBLIC WAREHOUSES

Freeman has strategically placed satellite locations across North America with customer service representatives ready to help. Thousands of products are stocked at these locations as well as public warehouses to reduce your shipping costs.

STRATEGIC & EFFECTIVE STOCKING SYSTEMS

Freeman's inventory staff constantly monitors sales and stocking data across the country to properly provide the right amount of products at each location.

WORLDWIDE SHIPPING

Freeman ships orders all across the globe and has various international distributors available to supply customers with top-quality products.



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