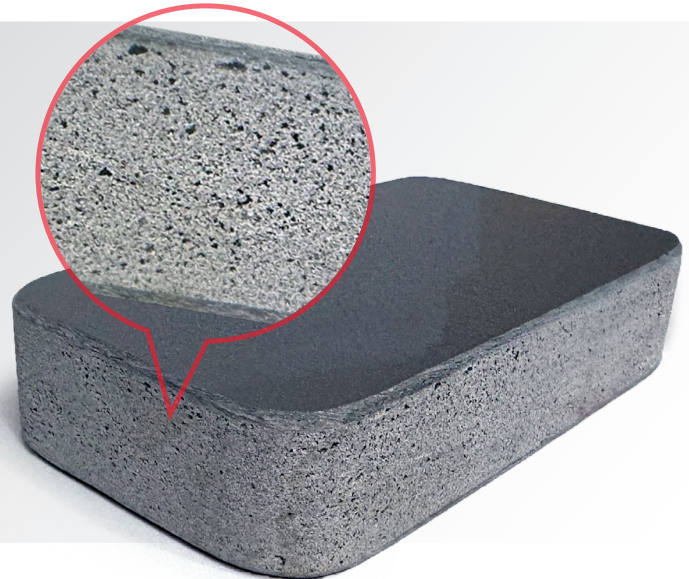




SIKA HIGH-TEMPERATURE TOOLING DOUGH

➔ Freeman is excited to introduce **Sika High-Temperature Epoxy Tooling Dough** to our product line. *SikaBiresin L325 HT offers a considerable time and labor savings in tool construction. Tools constructed with this dough maintain light weight with very high degree of dimensional stability. It is compatible with a variety of surface coats and laminating resins available in our product line (more details on back).*



Specifications

	Mix Ratio R:H (by wt.)	Mix Ratio R:H (by vol.)	Gel Time (min.) @ 72°F	Demold Time (hr.) @ 72°F	Hardness (Shore D)	Mixed Viscosity (cps)	Density (g/cc)	Volumetric Yield (in. ³ /lb.)	Flexural Strength (psi)	Flexural Modulus (psi)	Compressive Strength (psi)	Tensile Strength (psi)	Deflection Temp. (°F)
Tooling Dough													
SikaBiresin L325 HT	100:25	3.7:1	90-120	16-24	65-70	Dough-like	0.633	43.7	9,600	540,000	4,900	-	425
Surface Coats													
Freeman 935-15	100:11	100:18	28	24	88	27,500	1.6	17.30	7,950	1.3 x 10 ⁶	26,500	4,000	300
Freeman 935-30	100:11	100:18	43	24	90	29,500	1.6	17.30	7,950	1.3 x 10 ⁶	26,500	4,000	300
Freeman 935-90	100:11	100:18	90	24	88	25,350	1.6	17.30	7,950	1.3 x 10 ⁶	26,500	4,000	300
Freeman 955	100:10	100:15	45	16	90	Thixotropic	1.47	18.9	6,500	-	28,000	5,800	300
Sika SP-707	100:15	-	23	24	90	12,400	1.39	19.9	19,560	509,000	15,290	11,640	220
Sika ES-215-1	100:18	4.4:1	16	24	89	60,000	1.31	21.1	8,108	339,700	21,700	7,101	301
Sika ES-215-2	100:22	3.46:1	83	24	88	38,000	1.23	22.5	9,253	379,100	20,820	3,593	307
Sika ES-215-IHG	100:17	4.8:1	180-220	24	89	125,000	1.23	22.5	8,416	428,400	21,690	4,938	382
Laminating Resins													
Freeman 927	100:13	100:18	60	24	90	3,600	1.31	21.1	33,000	-	52,800	26,000	270
Freeman 4105	100:14	6:1	30	24	88	1,800	1.15	24.0	16,600	470,000	21,600	12,400	355
SikaBiresin L337	100:16	100:21	45-60	24	88	4,000	1.21	22.8	39,035	1.3 x 10 ⁶	14,930	27,285	238
SikaBiresin CR163-1	100:19	-	50-60	24	90	2,500	1.09	25.3	90,480	4.6 x 10 ⁶	-	62,630	306
SikaBiresin CR163-2	100:25	-	50-75	24	88	3,500	1.18	23.4	44,540	2.3 x 10 ⁶	-	33,690	320
SikaBiresin CR163-6	100:24	-	180-210	24	90	4,500	1.14	24.2	76,200	3.5 x 10 ⁶	-	56,090	389
ASTM	-	-	D-2471	-	D-2240	D-2393	D-792	D-792	D-790	D-790	D-695	D-638	D-648

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

HIGH-TEMPERATURE EPOXY TOOLING SYSTEMS

SikaBiresin® L325 HT High-Temperature Tooling Dough

- ▶ Syntactic Dough
- ▶ 90-120 min. gel time
- ▶ Up to HDT 425°F

This compound was specifically designed for constructing high-temperature tools, allowing the user to save a considerable amount of time.

Freeman 935 Epoxy Surface Coat

- ▶ Aluminum-filled
- ▶ 3 options for gel time
- ▶ Up to HDT 300°F

This high-temperature resistant material is ideal for laminated tooling subjected to elevated temperatures such as

vacuum forming and prototype injection molds.

Freeman 955 Epoxy Surface Coat

- ▶ Aluminum-filled
- ▶ Thixotropic
- ▶ Up to HDT 300°F

Freeman 955 works well for tooling applications up to 300°F, including vacuum form tools, RTM and RIM molds, compression and injection

molds. It pairs well with Freeman 927 Hi-Temp Epoxy Laminating Resin. Both require heated post cure to obtain full properties.

Sika SP-707 Epoxy Surface Coat

- ▶ Aluminum-Filled
- ▶ 23 min. gel time
- ▶ Up to 220°F HDT

SP-707 is a high temperature aluminum-filled epoxy surface coat offering excellent surface duplication while maintaining no-sag qualities. It is an

excellent option for applications such as vacuum form, fixtures, RTM, and cold press molds.

Sika ES-215 Series Epoxy Surface Coat

- ▶ Graphite-filled
- ▶ 3 options for gel time
- ▶ Up to 368°F HDT

This high-temperature, graphite-filled epoxy surface coat system was developed for the aerospace industry where demands for heat resistance

greater than 350°F is necessary.

Freeman 4105 Epoxy Laminating Resin

- ▶ Unfilled
- ▶ 30 min. gel time
- ▶ Up to HDT 355°F

This unfilled, low-viscosity laminating system offers excellent wet out for service temperature up to 350°F.

A heated post cure is required to obtain full properties. It is excellent

for bonding High-Temperature Tooling Boards.

Freeman 927 Epoxy Laminating Resin

- ▶ Aluminum-filled
- ▶ 60 min. gel time
- ▶ Up to HDT 270°F

Freeman 927 is a low viscosity, aluminum-filled laminating system that offers excellent wet out and good working time for applications requiring service temperature up

to 300°F. It pairs well with Freeman 955 Surface Coat.

Both require heated post cure to obtain full properties.

SikaBiresin® L337 Epoxy Laminating Resin

- ▶ Excellent cloth wet-out
- ▶ 45-60 min. gel time
- ▶ Up to HDT 238°F

This filled epoxy laminating resin is designed for high temperature application. It can be used at continuous temperatures of 230°F and

up to 250°F intermittently.

SikaBiresin® CR163 Series Epoxy Laminating Resin

- ▶ Meets Boeing/McDonnell Specifications
- ▶ 3 options for gel time
- ▶ Up to 450°F Tg

SikaBiresin® CR163 (formerly Sika EL-315) is a very stable, high-temperature epoxy laminating system, offering good wet-out and Tg up to 450°F.

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.

