SIKA ADVANCED RESINS

TOOLING AND COMPOSITES PRODUCT GUIDE

BUILDING TRUST

SIKA ADVANCED RESINS

THE LEADING BRAND FOR TOOLING AND COMPOSITE SOLUTIONS

Sika's Advanced Resins group is a leading formulator of high-performance resins for the tooling and composite materials industry. With over 75 years of expertise in the development of high-quality polyurethane and epoxy resins, we aim to provide our customers with best-in-class materials and sales support to enable their consistent technical and commerical success.

Sika Advanced Resins offers solutions for every stage of composite manufacturing, from the model and prototype phase, all the way to final part production. Our products are trusted worldwide across a wide range of industries, such as automotive and transportation, marine, aerospace, sports and leisure, renewable energy, construction, foundry model making, and more.

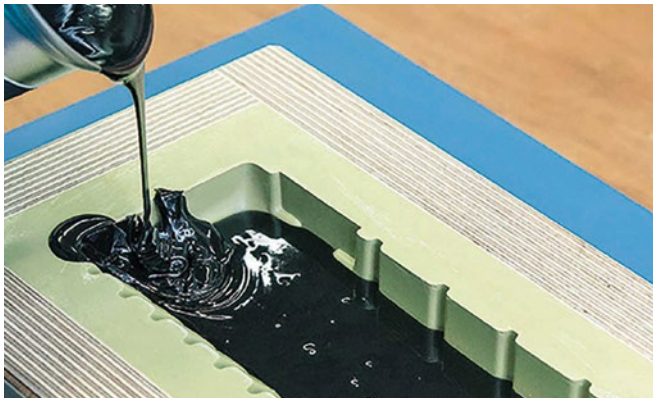
PRODUCT CATEGORIES

TOOLING BOARDS AND PASTES

Sika offers a complete portfolio of high-quality tooling boards and paste systems for model and mold making, providing users with dimensionally stable and easy-to-machine solutions.

Our polyurethane and epoxy tooling boards are available in a wide range of densities and can be used for the construction of plugs and master models, diverse molds, and other manufacturing tools.

Sika's extrudable epoxy modeling pastes are 2-component systems which are applied in layers on lightweight substructures. After curing, the paste surface can be easily milled by CNC machining to achieve joint-free models and tools of the highest quality.



CASTING SYSTEMS

Sika's casting solutions are two-component polyurethane and epoxy systems suitable for a wide range of applications and industries. These systems provide fast and cost-efficient part production for prototyping, vacuumforming molds, foundry patterns, and sheet metal forming tool applications. We also provide solutions for making auxillary items, such as master models, core models, and negatives.

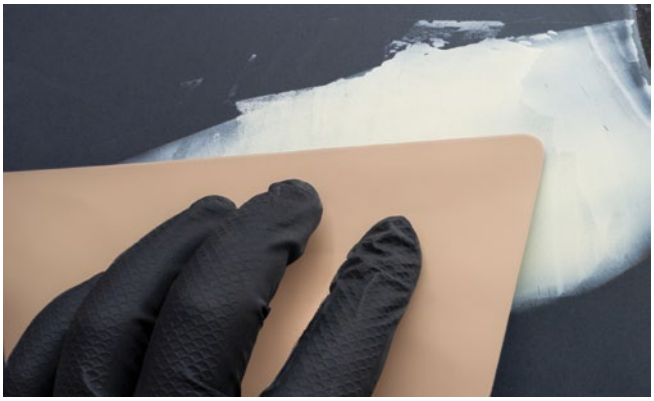
Our polyurethane casting range includes solutions for prototyping, mold making, and part making, as well as fastcast solutions with rapid processing capabilities.

Our epoxy range offers a great balance of mechanical, chemical, and thermal resistance, and includes mass casting systems for applications requiring thicker castings.

COMPOSITE LAMINATING AND INFUSION SYSTEMS

Sika's laminating and infusion resins are specially designed for the production of high-performance composite tools and parts. These systems provide optimal wetting of fiber materials with a wide range of viscosities, working times, and temperature-resistance capabilities available to suit any production process. Ideal for the construction of parts, models, negatives, molds, and tools, the end result is a high-grade laminate with excellent strength properties.

We also offer a range of specially formulated mold making surface coats that provide excellent processing features and resistance to mechanical, thermal, and chemical stress.



FILLING AND FAIRING COMPOUNDS

Sika provides the industry's most unique and diverse range of filling and fairing compounds. Our product line includes high-performance, two-component polyester and epoxy systems capable of meeting requirements in applications ranging from the most basic pinhole filling, to full fairing/ surfacing and complex structural repairs.

Sika's filling and fairing compounds offer superior performance properties, ease-of-use, and compatibility with common substrates encountered in automotive, transportation, marine, aerospace, and many other end markets. Within our portfolio, you can find the material that provides the perfect combination of hardness, working time, temperature-resistance, and adhesive profile for your specific needs.

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"As a global leader in Tooling and Composites, it is our aim to provide our customers with best in class, innovative, and tailor-made solutions. Being close to our customers is a key priority for us; worldwide production and on-site support from our experts is the basis of our success. Every day, we are looking ahead, to create new and better solutions together with our customers."

MORTEN MUSCHAK
Head Corporate Automotive & Industry

MODELING AND TOOLING BOARDS
POLYURETHANE AND EPOXY

MODELING BOARDS

Product	Technology	Color	Density (lbs/ft³)	Tg (°F)	CTE (ppm/°F)	Adhesive	Patch Paste	Description
SikaBlock® M600 N	Polyurethane	Light brown	37	185	31	TCC-230	SikaBiresin® AP034	Easy-to-machine, very high dimensional stability, and good heat distortion temperature. Well-suited for master models, plugs, mock-ups, and prototypes.
SikaBlock® M700 N	Polyurethane	Light brown	44	187	31	TCC-230	SikaBiresin® AP034	Easy-to-machine, very high dimensional stability, and good heat distortion temperature. Well-suited for master models, plugs, mock-ups, and prototypes.

TOOLING BOARDS

Product	Technology	Color	Density (lbs/ft³)	Tg (°F)	CTE (ppm/°F)	Adhesive	Patch Paste	Description
DP-1051	Polyurethane	Gray	52	188 (HDT)	28	TCC-230	SikaBiresin® AP017	Aluminum-filled, very high dimensional stability, and good heat distortion temperature. Well-suited for vacuum forming molds, checking fixtures, temporary models, and headliner tools.
LAB 850	Polyurethane	Red	74	176	53	TCC-230	TCC-5220	Abrasion and impact-resistant with high dimensional stability. Well-suited for vacuum forming molds, checking fixtures, temporary models, headliner tools, and low-volume foundry patterns.
SikaBlock® M974	Epoxy	Light blue	45	239	20	SikaBiresin® CR128	-	High-temperature resistance, low CTE, and excellent dimensional stability. Designed for direct-to-mold epoxy prepregs, lay-up tools and parts, thermoforming, molds, and master models.
PP-1052	Polyurethane	Red	71	140 (HDT)	36	TCC-230	TCC-5220	Dense, filled board with very good abrasion resistance. Well-suited for vacuum forming molds, checking fixtures, temporary models, headliner tools, and low-volume foundry patterns.

(HDT): Heat deflection temperature listed in place of Tg.

BOARD ADHESIVES AND PATCH PASTES

Product	Technology	Hardener	Mixed Color	Shore D Hardness	Density (lbs/gal)	Pot Life (min)	Adhesive	Patch Paste	Recommended Boards
SikaBiresin® AP017	2-C Polyester	BPO Cream Hardener	Gray	80	13.3	5 - 7	-	✓	DP-1051
SikaBiresin® AP034	2-C Polyester	BPO Cream Hardener	Brown	60	5.1	4 - 6	-	✓	SikaBlock® M600 N, SikaBlock® M700 N, and other polyurethane-based model boards
SikaBiresin® CR128	2-C Epoxy	SikaBiresin® CH128-2	Clear	88*	9.5	35 - 50	✓	-	SikaBlock® M974
		SikaBiresin® CH128-4	Clear amber	88*	-	120 - 140	✓	-	
TCC-205	2-C Epoxy	TCC-102	Clear amber	82 - 85	9.1	15 - 20	✓	-	Polyurethane-based modeling and tooling boards
		TCC-104	Clear amber	82 - 85	9.2	30 - 35	✓	-	
TCC-230	2-C Epoxy	TCC-102	Clear amber	75 - 80	8.8	5 - 10	✓	-	Polyurethane-based modeling and tooling boards
		TCC-104	Clear amber	75 - 80	8.8	15 - 20	✓	-	
TCC-5220	2-C Polyurethane	TCC-5220	Red	80 - 85	8.6	3	-	✓	PP-1052 and LAB 850

* Value based on room temperature cure followed by post-cure. See Product Data Sheet for specific post-cure schedule.

EXTRUDABLE TOOLING PASTES
EPOXY

EXTRUDABLE PASTES FOR MODELS, TOOLS AND PLUGS

Product	Technology	Hardener	Mix Ratio (parts by weight)	Mixed Color	Density (lbs/gal)	Tg (°F)	CTE (ppm/°F)	Shore D Hardness	Description
SC 155 NA	2-C Epoxy	SC 155 NA	100R / 100H	Gray	4.5	140*	49*	51*	Low-density and low-hardness system with good surface aspect
SikaBiresin® SC175	2-C Epoxy	SikaBiresin® SC175	100R / 100H	Orange	5.2	181*	39*	60*	Application up to 1.18" on vertical surfaces. Good surface aspect and heat-cured thermal resistance.
SikaBiresin® SC180	2-C Epoxy	SikaBiresin® SC180	100R / 100H	Dark orange, off-gray	6.6	180*	43*	62*	Application up to 1.18" on vertical surfaces. Very good surface aspect and good thermal-resistance.
SikaBiresin® SC390	2-C Epoxy	SikaBiresin® SC390	100R / 100H	Gray	8.9	196*	31*	75*	Application up to 1.20" on vertical surfaces. Very good surface aspect and good thermal-resistance.

* Value based on room temperature cure followed by post-cure. See Product Data Sheet for specific post-cure schedule.

REPAIR FILLERS FOR EXTRUDABLE PASTES

Product	Technology	Hardener	Resin Color	Shore D Hardness	Pot Life (min)	Max. Service Temperature (°F)	Description
SikaBiresin® AP170	2-C Polyester	BPO Cream Hardener	Gray	59	4 - 7	280	Designed for repairing small defects and voids in models, tools, and plugs made with the SikaBiresin® SC175 extrudable epoxy modeling paste

CASTING SYSTEMS
POLYURETHANE

PROTOTYPING SYSTEMS

Product	Technology	Polyol	Isocyanate	Mixed Color	Shore D Hardness	Pot Life (min)	Tg (°F)	Flexural Modulus (psi)	Description
PX 223 HT	2-C Polyurethane	PX 223 HT	PX 223 HT	Black	80*	6 - 7	248*	334,000*	High-temperature and impact-resistant system for simulating High Impact Polystyrene (HIPS) parts
SikaBiresin® PX224	2-C Polyurethane	SikaBiresin® PX224F	SikaBiresin® PX224	Light amber	83*	3 - 4	216*	333,300*	For production of high impact strength prototype parts. Suitable for vacuum or hand casting. Easy to pigment.
		SikaBiresin® PX224		Light amber	83*	6 - 9	201*	333,300*	
		SikaBiresin® PX224L		Light amber	85*	12 - 16	213*	386,000*	
PX 523	2-C Polyurethane	PX 523	PX 5210	Clear	75*	15 - 20	237*	321,000*	UV and high-temperature resistant system for transparent mock up and prototype parts
PX 1000 NA	2-C Polyurethane	PX 1000 NA	PX 1000	Off-white	74*	15 - 20	167*	200,000*	For simulating thermoplastic parts, mock-ups, and prototypes
TCC-8020	2-C Polyurethane	TCC-8020	TCC-8021	White	75	16 - 18	210 (HDT)*	237,500	For simulating RIM parts and polypropylene parts with thermoplastic characteristics

* Value based on room temperature cure followed by post-cure. See Product Data Sheet for specific post-cure schedule.

(HDT): Heat deflection temperature listed in place of Tg.

CASTING SYSTEMS FOR MOLDS AND PARTS

Product	Technology	Hardener	Mixed Color	Shore Hardness	Pot Life (min)	Viscosity (cps)	Elongation (%)	Description
TCC-5000	2-C Polyurethane	TCC-5050	Amber	50 A	15 - 20	1,000	500	Exceptionally tough system for the production of flexible molds, nesting fixtures, metal forming pads, belts, industrial wheels, and sound damping pads
		TCC-5060	Amber	60 A	15 - 20	1,000	600	
		TCC-5070	Amber	70 A	15 - 20	1,000	500	
		TCC-5080	Amber	80 A	12 - 14	1,500	400	
		TCC-5090	Amber	90 A	15 - 20	2,500	300	
TCC-6060	2-C Polyurethane	TCC-6060	Amber	60 D	12 - 15	2,500	200	Impact-resistant, low-shrinkage system for the production of molds, foundry patterns, core box liners, industrial rollers, and shims
TCC-8020	2-C Polyurethane	TCC-8021	White	75 D	16 - 18	150	6	For simulating RIM parts and polypropylene parts with thermoplastic characteristics
UR 3490	2-C Polyurethane	UR 3490	Beige	67 D*	14	1,500	120*	Impact-resistant surface casting system for foundry tooling, pattern, and core box applications
UR 3558	2-C Polyurethane	UR 3558	Amber	95 A*	25	3,000	460*	Abrasion and impact-resistant system for foundry tooling applications

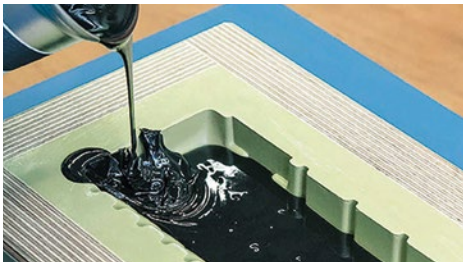
* Value based on room temperature cure followed by post-cure. See Product Data Sheet for specific post-cure schedule.

FASTCAST SYSTEMS FOR MOLDS AND PARTS

Product	Technology	Polyol	Iscocyanate	Mixed Color	Shore D Hardness	Pot Life (min)	Viscosity (cps)	Tg (°F)	Description
F100	2-C Polyurethane	F100	F100	Gray	82*	5	2,500	225*	Filled, high-temperature resistant system for the production of checking and nesting fixtures, core boxes, thermoforming tools, and prototype parts
		F100 Medium		Blue	80*	9	2,500	158*	
		F100 LPL		Gray	79	15	2,500	128	
HH Extreme	2-C Polyurethane	HH Extreme	HH Extreme	Translucent / off-white	72*	2 - 2.5	350	120*	Fast-setting, easy-to-pigment, and extremely durable system for the manufacture of rock climbing handholds

* Value based on room temperature cure followed by post-cure. See Product Data Sheet for specific post-cure schedule and room temperature cure data.

CASTING SYSTEMS
EPOXY



CASTING SYSTEMS (ROOM TEMPERATURE)

Product	Technology	Hardener	Mixed Color	Shore D Hardness	Pot Life (min)	Max. Service Temp. (°F)	Max. Casting Thickness (in)	Description
EC-440	2-C Epoxy	EC-440	Light amber	90 - 95	60 - 80	208 (Tg)*	6 with fillers	For use in prototype or low-voume production tooling applications. Can also be utilized as a back-fill material in nickel-shell tooling applications. Requires use of N-6 and N-61 fillers.
TCC-401	2-C Epoxy	TCC-104	Black	80	30	180	1	Abrasion-resistant, iron-filled system for cast hydroform tools, stretch form blocks, and metal forming dies
		TCC-104-5	Black	80	50	180	4	
		TCC-105	Black	80	60 - 120	180	4+ with fillers	
TCC-410	2-C Epoxy	TCC-104	Gray	84	60	180	1	Aluminum-filled, impact-resistant system for surface casting on prototype stamping dies, and mass casting applications
		TCC-104-5	Gray	84	100	210	4	
		TCC-105	Gray	84	120 - 180	240	4+ with fillers	
TCC-626	2-C Epoxy	TCC-116A	Black	85*	120	210 (HDT)*	1	Impact-resistant system with excellent thermal shock properties for surface casting applications

* Value based on room temperature cure followed by post-cure. See Product Data Sheet for specific post-cure schedule.
(Tg): Glass transition temperature listed in place of maximum service temperature.

(HDT): Heat deflection temperature listed in place of maximum service temperature.

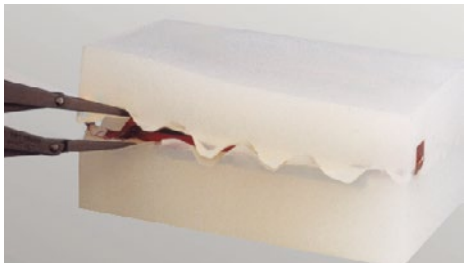
CASTING SYSTEMS (HIGH-TEMPERATURE)

Product	Technology	Hardener	Mixed Color	Shore D Hardness	Pot Life (min)	Tg (°F)	Max. Casting Thickness (in)	Description
EC-415	2-C Epoxy	EC-415	Gray	88 - 90*	120 - 180	428 (HDT)*	3	Aluminum-filled system with excellent thermal conductivity for cast autoclave molds, plastic injection molds, and compression molding applications
EC-433	2-C Epoxy	EC-433-2	Gray	90	120	288	< 1	Aluminum-filled system for heat-resistant tooling applications, such as protoype injection molding, vacuum forming, and compression molds
		EC-433-3	Gray	90	200	305	1	
		EC-433-4	Gray	91	270	285	<3	
EC-439	2-C Epoxy	EC-439	Light amber	89*	180+	270*	6+ with fillers	For low-volume production of RIM, RTM, and cold compression molds. Requires use of N-6 and N-60 fillers.

* Value based on room temperature cure followed by post-cure. See Product Data Sheet for specific post-cure schedule.

(HDT): Heat deflection temperature listed in place of glass transition temperature.

MOLD MAKING SILICONES
SILICONE



MOLD MAKING SILICONES

Product	Technology	Hardener	Mixed Color	Shore A Hardness	Pot Life (min)	Viscosity (cps)	Tear Resistance (ppi)	Description
AX-SIL 4240	2-C Silicone	AX-SIL 4240	Translucent	38	180	40,000	85	Addition-cure (platinum-catalyzed) silicone elastomer ideal for reproducing intricate details
ESSIL 125 NA	2-C Silicone	ESSIL 125 NA	Blue, white	30	120 (Blue) 240 (White)	20,000	100	Condensation-cure (tin-catalyzed) silicone elastomer for casting of polyurethane and epoxy-based systems
ESSIL 245	2-C Silicone	ESSIL 255	Gray	53	100	25,000	75	Addition-cure (platinum-catalyzed) silicone elastomer that provides high strength and excellent release characteristics

LAMINATION SYSTEMS
EPOXY

LAMINATION SYSTEMS (ROOM TEMPERATURE)

Product	Technology	Hardener	Pot Life (min)	Viscosity (cps)	Tg (°F)	Flexural Strenth (psi)	Flexural Modulus (psi)	Flame Retardant	Description
SikaBiresin® CR62 FR	2-C Epoxy	SikaBiresin® CH62	45	2,650	143 (HDT)*	18,550 (Lam.)	774,000 (Lam.)	✓	Halogen-free laminating system. Meets FAR 25.853 flame test requirements.
		SikaBiresin® CH62-1	16	1,700	137 (HDT)*	5,018 (Lam.)	280,000 (Lam.)	✓	
SikaBiresin® CR72	2-C Epoxy	SikaBiresin® CH72-1	34	633	154*	16,420*	445,545*	-	UV-resistant laminating and infusion system for the fabrication of composite tools and parts
		SikaBiresin® CH72-2	43	390	163*	14,917*	408,682*	-	
		SikaBiresin® CH72-3	52	410	159*	13,899*	409,770*	-	
SikaBiresin® CR77 FR	2-C Epoxy	SikaBiresin® CH77-2	68	2,100	199*	23,200*	548,000*	✓	UV-stabilized, halogen-free laminating system. Meets FAR 25.853 flame test requirements.
SikaBiresin® CR88	2-C Epoxy	SikaBiresin® CH88-6	140	550	202*	15,692*	425,751*	-	Laminating and infusion system for production of composite tools and parts. Meet's Lloyd's Register requirements for shipbuilding applications.
SikaBiresin® CR94	2-C Epoxy	SikaBiresin® CH94-1	20 - 30	1,200	203*	14,500*	468,000*	-	High strength, 100% solids, low-exotherm laminating system with superior handling and perfomance properties
		SikaBiresin® CH94-3	60 - 90	1,000	203*	18,500*	472,000*	-	
		SikaBiresin® CH94-6	110 - 160	1,000	194*	16,400*	442,000*	-	
SikaBiresin® CR101	2-C Epoxy	SikaBiresin® CH101-2	40 - 60	1,500	196 (HDT)*	-	-	-	High-performance, impact-resistant, toughened laminating system for composite parts
		SikaBiresin® CH101-3	85 - 95	2,500	214 (HDT)*	-	-	-	
SikaBiresin® CR107	2-C Epoxy	SikaBiresin® CH107-7	215	1,250	178*	18,800*	512,000*	-	Long pot life laminating system for wet lay-up, vacuum bagged, and RTM tools and parts
SikaBiresin® CR108 FR	2-C Epoxy	SikaBiresin® CH108-1	61	1,000	226*	15,500*	495,000*	✓	Halogen-free, flame retardant lamination system for use with glass, carbon, and aramid fabrics. Parts can be heated immediately after application for faster processing time.
		SikaBiresin® CH108-4	222	1,375	203*	18,800*	490,000*	✓	
		SikaBiresin® CH108-8	480	1,300	199*	12,500*	380,000*	✓	
SikaBiresin® CR111	2-C Epoxy	SikaBiresin® CH108-4	28	2,100	232 (HDT)	13,900	440,000	-	Laminating system for the production of composite tools and parts. Can also by utilized as a coating adhesive
EPOLAM 2500	2-C Epoxy	SikaBiresin® CH108-8	78	3,190	220*	9,790*	593,023*	✓	Filled, white laminating system. Meets FAR 25.853 flame test requirements.
SikaBiresin® L302	2-C Epoxy	SikaBiresin® L302-1	28 - 34	3,000	-	-	-	-	General-purpose, filled, white laminating system with good fabric wet-out properties
TCC-205	2-C Epoxy	TCC-102	15 - 20	700	180 (MST)	18,000	-	-	Epoxy laminating system and adhesive for tooling boards
		TCC-104	30 - 35	800	180 (MST)	18,000	-	-	
TCC-230	2-C Epoxy	TCC-102	5 - 10	4,400	-	-	-	-	Epoxy laminating system and adhesive for tooling boards
		TCC-104	15 - 20	4,400	-	-	-	-	

* Value based on room temperature cure followed by post-cure. See Product Data Sheet for specific post-cure schedule.
(Lam.): Value based on testing conducted on fiber reinforced laminate.

(HDT): Heat deflection temperature listed in place of Tg.
(MST): Maximum service temperature listed in place of Tg.

LAMINATION SYSTEMS (HIGH-TEMPERATURE)

Product	Technology	Hardener	Pot Life (min)	Viscosity (cps)	Tg (°F)	Flexural Strenth (psi)	Flexural Modulus (psi)	Description
SikaBiresin® CR128	2-C Epoxy	SikaBiresin® CH128-2	35 - 50	2,500	-	-	-	Unfilled, non-staining system with excellent handling properties and fabric wet-out
		SikaBiresin® CH128-4	120 - 140	1,500	278 (HDT)*	-	-	
SikaBiresin® CR161	2-C Epoxy	SikaBiresin® CH161-6	125 - 155	450	327*	8,800*	392,000*	Laminating and infusion system for the production of composite tools and parts
SikaBiresin® CR163	2-C Epoxy	SikaBiresin® CH163-2	50 - 75	3,225	331*	44,540 (Lam.)*	2,296,000 (Lam.)*	Laminating system developed for composite tooling applications, such as autoclave, bonding jigs, oven cured processing, and heat induction RTM
		SikaBiresin® CH163-6	180 - 210	4,500	450*	76,200 (Lam.)*	3,504,000 (Lam.)*	
SikaBiresin® CR216	2-C Epoxy	SikaBiresin® CH216-50	1,500	700	396*	12,442*	489,574*	Laminating and infusion system for the production of composite tools and parts
SikaBiresin® CR226	2-C Epoxy	SikaBiresin® CH226-20	730	553	416*	9,059*	467,510*	Laminating and infusion system for the production of composite tools and parts
SikaBiresin® L337	2-C Epoxy	SikaBiresin® L337	45 - 60	4,000	238*	39,035 (Lam.)*	1,300,000 (Lam.)*	Filled laminating system with excellent handling properties and fabric wet-out

*Value based on room temperature cure followed by post-cure. See Product Data Sheet for specific post-cure schedule.
(Lam.): Value based on testing conducted on fiber reinforced laminate.

(HDT): Heat deflection temperature listed in place of Tg.

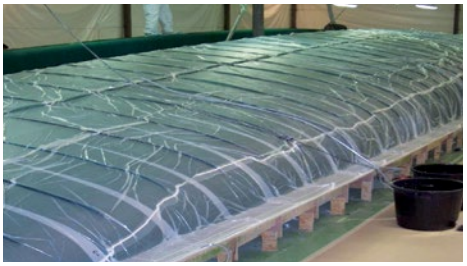
TOOLING DOUGHS AND LAMINATING PASTES

Product	Technology	Hardener	Pot Life (min)	Density (lbs/gal)	Peak Exotherm (°F)	Flexural Strenth (psi)	Flexural Modulus (psi)	Description
SikaBiresin® L323	2-C Epoxy	SikaBiresin® L323	120 - 150	5.8	105	13,050 (Lam.)	1,027,000 (Lam.)	Room temperature use composite tooling dough for the construction of tools, jigs, and sandwhich structures
SikaBiresin® L325 HT	2-C Epoxy	SikaBiresin® L325 HT	90 - 120	5.3	130	9,600*	540,000*	High-temperature use composite tooling dough for the construction of tools, jigs, and sandwhich structures
SikaBiresin® L400	2-C Epoxy	SikaBiresin® L400	120	7.6	105	6,955*	637,560*	Glass fiber-filled laminating paste. Primarily used as a structural backing material.

*Value based on room temperature cure followed by post-cure. See Product Data Sheet for specific post-cure schedule.

(Lam.): Value based on testing conducted on fiber reinforced laminate.

INFUSION SYSTEMS
EPOXY



INFUSION SYSTEMS (ROOM TEMPERATURE)

Product	Technology	Hardener	Pot Life (min)	Viscosity (cps)	Tg (°F)	Flexural Strenth (psi)	Flexural Modulus (psi)	Description
SikaBiresin® CR72	2-C Epoxy	SikaBiresin® CH72-1	34	633	154*	16,420*	445,545*	UV-resistant laminating and infusion system for the fabrication of composite tools and parts
		SikaBiresin® CH72-2	43	390	163*	14,917*	408,682*	
		SikaBiresin® CH72-3	52	410	159*	13,899*	409,770*	
SikaBiresin® CR76	2-C Epoxy	SikaBiresin® CH76-9	550 - 570	280	170*	19,040*	450,000*	Long pot life infusion system for production of composite tools and parts
SikaBiresin® CR86	2-C Epoxy	SikaBiresin® CH86-2	25 - 35	266	183*	17,278*	444,808*	High-clarity infusion system for production of composite tools and parts
		SikaBiresin® CH86-3	90 - 120	250	178*	15,419*	419,367*	
		SikaBiresin® CH86-6	180 - 250	250	171*	15,951*	432,003*	
SikaBiresin® CR88	2-C Epoxy	SikaBiresin® CH88-6	140	550	202*	15,692*	425,751*	Laminating and infusion system for production of composite tools and parts. Meet's Lloyd's Register requirements for shipbuilding applications.

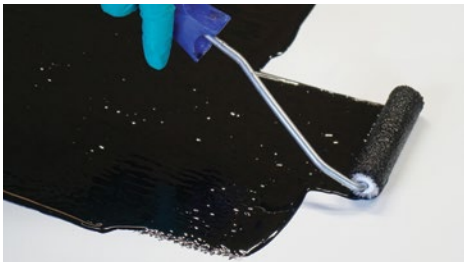
* Value based on room temperature cure followed by post-cure. See Product Data Sheet for specific post-cure schedule.

INFUSION SYSTEMS (HIGH-TEMPERATURE)

Product	Technology	Hardener	Pot Life (min)	Viscosity (cps)	Tg (°F)	Flexural Strenth (psi)	Flexural Modulus (psi)	Description
SikaBiresin® CR86	2-C Epoxy	SikaBiresin® CH138-10	309	530	280*	12,768*	366,186*	High-clarity infusion system for the production of composite tools and parts
SikaBiresin® CR161	2-C Epoxy	SikaBiresin® CH161-6	125 - 155	450	327*	8,800*	392,000*	Laminating and infusion system for the production of composite tools and parts
SikaBiresin® CR216	2-C Epoxy	SikaBiresin® CH216-50	1,500	700	396*	12,442*	489,574*	Laminating and infusion system for the production of composite tools and parts
SikaBiresin® CR226	2-C Epoxy	SikaBiresin® CH226-20	730	553	416*	9,059*	467,510*	Laminating and infusion system for the production of composite tools and parts

* Value based on room temperature cure followed by post-cure. See Product Data Sheet for specific post-cure schedule.

SURFACE COATS
EPOXY AND POLYESTER



SURFACE COATS (ROOM TEMPERATURE)

Product	Technology	Hardener	Mixed Color	Shore D Hardness	Pot Life (min)	Density (lbs/gal)	Heat Deflection Temperature (°F)	Description
ES-218	2-C Epoxy	ES-218	White	83	22	11.6	114	Durable and sandable system for duplication work
TCC-352	2-C Epoxy	TCC-102	Light gray	89	20	11.9	-	Abrasion-resistant system for creating durable surface reproductions. Ideal for checking and trimming fixtures.

SURFACE COATS (HIGH-TEMPERATURE)

Product	Technology	Hardener	Mixed Color	Shore D Hardness	Pot Life (min)	Density (lbs/gal)	Heat Deflection Temperature (°F)	Description
APG 1750 S	2-C Polyester	MEKP	Orange, black	87*	22	10.7	-	Styrene-free system for the production of high-gloss mold surfaces. Provides excellent adhesion to epoxy. Can be used in application termperatures up to 400°F.
ES-215	2-C Epoxy	ES-215-1	Black	88 - 90*	16	11	277*	Graphite-filled system for compsite and epoxy laminate tools and parts
		ES-215-2	Black	87 - 88*	83	10.3	288*	
		ES-215-IHG	Black	88 - 90*	180 - 220	11	368*	
ES-221	2-C Epoxy	ES-221	Black, white	90*	22	12.4	230*	System for plastic-faced-plasters, or high-temperature molds requiring a high-gloss surface
ES-224	2-C Epoxy	ES-224	Gray	89 - 90*	60	14.8	174*	Abrasion-resistant system for vacuum form molds, drape form molds, RIM molds, RTM molds,and intermediate-to-high-temperature production tools. Tg of 264°F can be reached with full post-cure.
ESG-215	2-C Epoxy	ESG-215	Black	90*	35 - 50	11	249*	Graphite-filled system for repairing surface defects on composite molds, and making minor engineering changes
		ESG-215-T	Black	90*	35 - 50	10.4	385*	
SP-707	2-C Epoxy	SP-707	Gray	90*	23	11.6	229*	Aluminum-filled system with good non-sagging properties. Ideal for vacuum form molds, drape form molds, RIM molds, RTM molds, and injection molds.

* Value based on room temperature cure followed by post-cure. See Product Data Sheet for specific post-cure schedule.

FILLING AND FAIRING COMPOUNDS
POLYESTER AND EPOXY

POLYESTER FILLING AND FAIRING COMPOUNDS

Product	Technology	Resin Color	Shore D Hardness	Pot Life (min)	Max. Service Temperature (°F)	Flame Retardant	Below Waterline	Description
APF 77/1 R	Polyester Resin + BPO Hardener	Off-white	80	8 - 13	212	✓	-	Meets FAR 25.853 flame test requirements. Provides excellent adhesion to FRP, SMC, and urethane foam.
SikaBiresin® AP004	Polyester Resin + BPO Hardener	White, gray	89	4 - 7	285	-	-	Fast-setting filler that provides minimal shrinkage and excellent adhesion to a wide range of substrates
SikaBiresin® AP006	Polyester Resin + BPO Hardener	Orange	89	13 - 18	400	-	-	Styrene-free, high-temperature resistant filler with excellent adhesion to FRP substrates. Well-suited for gelcoat repair applications.
SikaBiresin® AP007	Polyester Resin + BPO Hardener	Gray, black, white	85	4 - 7	400	-	✓	Styrene-free, high-temperature resistant filler with excellent adhesion to a wide range of substrates. Exhibits high resistance to chemicals and water.
SikaBiresin® AP014	Polyester Resin + BPO Hardener	White, gray	86	4 - 7	285	-	-	Fast-setting filler that provides minimal shrinkage, and excellent adhesion to a wide range of substrates
SikaBiresin® AP017	Polyester Resin + BPO Hardener	Gray, black, white	80	5 - 7	400	-	✓	Styrene-free, high-temperature resistant filler with excellent adhesion to a wide range of substrates. Exhibits high resistance to chemicals and water.
AP017 SMC	Polyester Resin + BPO Hardener	Black, white	88	7 - 10	400	-	✓	Styrene-free, high-temperature resistant filler designed to retain similar properties to SikaBiresin® AP017, while closely matching sandability and hardness of SMC
SikaBiresin® AP034	Polyester Resin + BPO Hardener	Brown	60	4 - 6	130	-	-	Lightweight, fast-setting filler for making repairs or changes to model board surfaces, paricularly those that are polyurethane-based
SikaBiresin® AP077	Polyester Resin + BPO Hardener	White	85 - 88	9 - 11	400	-	✓	Styrene-free, high-temperature resistant filler with excellent adhesion to wood, FRP, SMC, and urethane foam
SikaBiresin® AP111	Polyester Resin + BPO Hardener	Light brown	70 - 80	10 - 20	130	-	-	Bond and fill system for fiberglass-to-fiberglass and SMC-to-SMC applications. Non-sagging up to 0.5".
SikaBiresin® AP112	Polyester Resin + BPO Hardener	Green, white	83	Green: 4 - 6 White: 8 - 10	130	-	-	High strength, fiber-filled bond and fill system for repair applications on SMC, RIM, and other thermoset composites
MICRO-ULTRA 15-3	Polyester Resin + BPO Hardener	White	75 - 77	4 - 8	130	✓	-	Meets FAR 25.853 flame test requirements. Provides excellent adhesion to a wide range of substrates.
P-12	Polyester Resin + BPO Hardener	Pine	60	4 - 6	130	-	-	Carvable filler for wood patterns and models
P-39	Polyester Resin + MEKP Hardener	Neutral	79	20 - 30	130	-	-	Fiberglass-filled system for use as a radius putty/filler behind marine gelcoat after it has been applied to the mold
P-51	Polyester Resin + BPO Hardener	Gray	83	4 - 7	130	-	-	Fiber-filled filler for bonding and filling various substrates, such as SMC, RIM, and other thermoset composites
SikaBiresin® AP526	Polyester Resin + BPO Hardener	Beige	60	4 - 6	130	-	-	Fast-setting filler for metal filling applications. Good adhesion to metal and FRP.
P-78	Polyester Resin + BPO Hardener	White	75	40 - 50	400	-	✓	Styrene-free, high-temperature resistant filler with long working life, and excellent adhesion to epoxy, wood, FRP, SMC, and urethane foam

EPOXY FILLING AND FAIRING COMPOUNDS

Product	Technology	Hardener	Mixed Color	Shore D Hardness	Pot Life (min)	Max. Service Temperature (°F)	Below Waterline	Description
SikaBiresin® AP100	2-C Epoxy	SikaBiresin® AP100-1	White	79	15	130	✓	Coating system developed for use in manufacturing composite and wooden boats. Fills and seals surface fabrics in FRP reinforced structures.
	2-C Epoxy	SikaBiresin® AP100-3	White	-	61	117	✓	
SikaBiresin® AP861	2-C Epoxy	SikaBiresin® AP861-1	Light brown	76 - 81	42 - 48	136	✓	Trowelable filler for fairing large surface imperfections on aluminum, steel, fiberglass or wooden marine vessels

EPOXY CORE AND EDGE FILLERS

Product	Technology	Hardener	Mixed Color	Shore D Hardness	Tg (°F)	CTE (ppm/°F)	Compressive Strength (psi)	Flame Retardant	Description
SikaBiresin® CF230	2-C Epoxy	SikaBiresin® CF234	Charcoal, green	65*	131*	72*	4,317*	✓	Edge filling paste for edging aluminum and other forms of honeycomb sandwhich structures. Meets FAR 25.853 flame test requirements.
SikaBiresin® CR970	2-C Epoxy	SikaBiresin® CH970-8	Black, white	83	-	-	-	-	Filleting paste for filling and sealing edges on composite materials

*Value based on room temperature cure followed by post-cure. See Product Data Sheet for specific post-cure schedule.

ELECTRONIC POTTING AND CASTING
POLYURETHANE

CASTING SYSTEMS

Product	Technology	Isocyanate	Shore Hardness	Pot Life	Viscosity (cps)	Max. Service Temp. (°F)	Elongation (%)	UL Listing	Description
SikaBiresin® RE461-16	2-C Polyurethane	SikaBiresin® RE101	46 D	50 Min.	1,100	266*	110*	UL94 V-0	General purpose, semi-flexible, and self-extinguishing. Ideal for intricate parts requiring UL94 V-0.
SikaBiresin® RE501A-95	2-C Polyurethane	SikaBiresin® RE102	57 A	55 Min.	2,200	284*	300*	UL 94 V-0 UL 746B: RTI 248°F	Flexible and self-extinguishing. Ideal for sensitive electronic components, sensors, and printed circuit boards.
SikaBiresin® RE531-93	2-C Polyurethane	SikaBiresin® RE102	53 D	22 Min.	1,650	320*	50*	UL 94 V-0 UL 746B: RTI 302°F	Semi-flexible and self-extinguishing. Ideal for capacitors, transformers, electronic cards and components with UL 94 and RTI qualification.
SikaBiresin® RE550-90	2-C Polyurethane	SikaBiresin® RE102	55 A	110 Sec.	500	248*	230*		Flexible and fast-curing. Ideal for the protection of sensitive electronic cards, components, wires, and cables.

*Value based on room temperature cure followed by post-cure. See Product Data Sheet for specific post-cure schedule.

STRUCTURAL ADHESIVES
POLYURETHANE

STRUCTURAL ADHESIVES

Product	Technology	Polyol	Isocyanate	Mixed Color	Pot Life (min)	Tensile Strength (psi)	Tensile Modulus (psi)	Elongation at Break (%)	Description
Adekit® A236-25	2-C Polyurethane	H 6236-25	H 6236	Light gray	25 - 35	1,740	12,000	60	Designed for structural, elastic bonding of composites and coated metals in marine, transporation, and general industrial applications. Low-exotherm, odor and solvent-free. Available in two versions for pot-life flexibility.
Adekit® A236-120	2-C Polyurethane	H 6236-120	H 6236	Beige	90 - 120	1,740	12,000	60	

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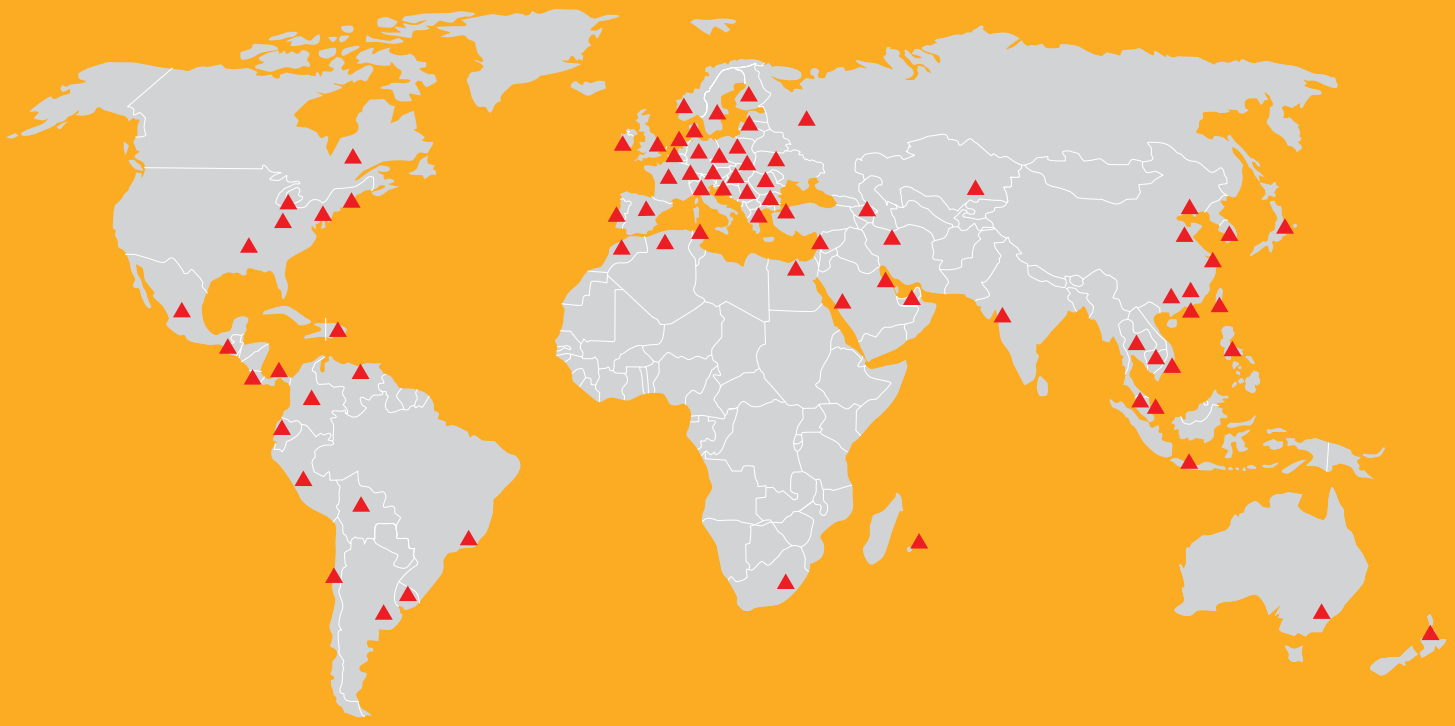

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