



SIKA ADVANCED RESINS

MACHINABLE BOARDS AND PASTES

BUILDING TRUST





SHAPING YOUR WORLD WITH HIGH-PERFORMANCE TOOLING SOLUTIONS.

SIKA MACHINABLE BOARDS AND TOOLING PASTES

Sika offers a complete portfolio of high-performance tooling boards and paste systems for model and mold manufacturing, providing users with easy-to-machine solutions that provide excellent surface quality.

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 that are applied in layers onto 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.

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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

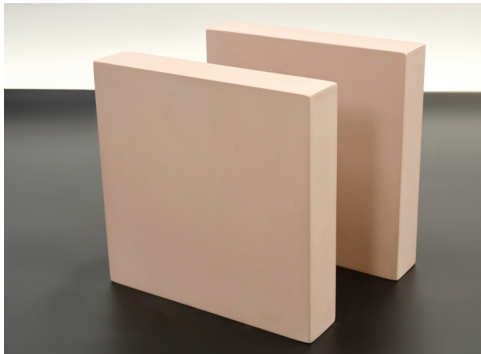
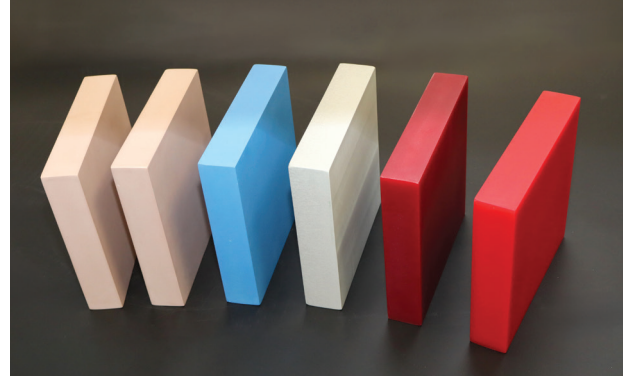
MACHINABLE BOARDS

High-Performance Model and Tooling Boards

Sika offers a full range of specially formulated, machinable boards for the manufacture of models, molds, and various tools. Our product line includes high-performance polyurethane and epoxy boards capable of meeting requirements in applications ranging from prototypes, to highly durable and abrasion-resistant foundry molds, to high-temperature resistant tools for composite parts. Providing excellent mechanical properties, superior surface quality, and easy machinability, Sika's machinable boards are available in a wide range of densities and thermal-resistance capabilities to meet the tooling needs for automotive, transportation, marine, aerospace, foundry, and many other industries.

MODEL BOARDS

Sika's modeling boards are polyurethane-based solutions with densities ranging from 37 – 44 lbs/ft³. These boards are easy to machine, seal, and varnish, resulting in master models with outstanding surface quality. Additionally, Sika's modeling boards provide very high dimensional stability, as well as good mechanical and thermal strength, rendering them suitable for moldmaking applications for low-volume parts.



SikaBlock® M600 N and SikaBlock® M700 N are identical in color and provide superior aesthetic properties for modelmaking applications.



Sika modeling boards meet the highest demands for surface quality.

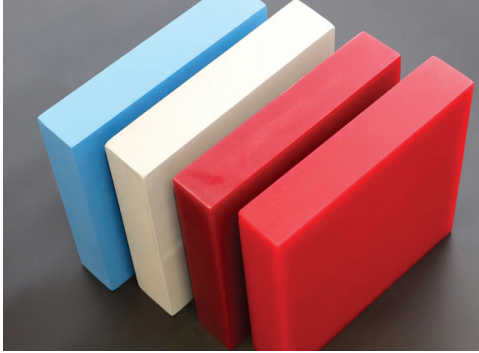


Achieve master models of high dimensional accuracy with SikaBlock® M600 N and SikaBlock® M700 N.

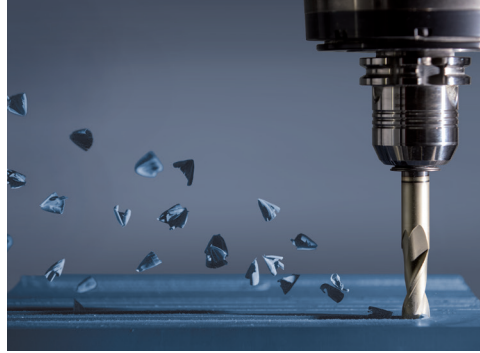
MODEL BOARD PRODUCTS	SIKABLOCK® M600 N	SIKABLOCK® M700 N
Technology	Polyurethane	Polyurethane
Color	Light Brown	Light Brown
Density (lbs/ft ³)	37	44
Shore D Hardness	58	64
Glass Transition Temperature (°F)	185	187
Coefficient of Thermal Expansion (ppm/°F)	31	31
Heat Deflection Temperature (°F)	170	172
Flexural Strength (psi)	2,755	3,625
Board Adhesive	SikaBiresin® B177	SikaBiresin® B177
Repair Paste	SikaBiresin® AP034	SikaBiresin® AP034
Applications	■ Data control models and cubings ■ Master models and negatives ■ Checking and holding fixtures ■ Vacuum forming molds for low-volume parts	■ Data control models and cubings ■ Master models and negatives ■ Checking and holding fixtures ■ Vacuum forming molds for low-volume parts

TOOLING BOARDS

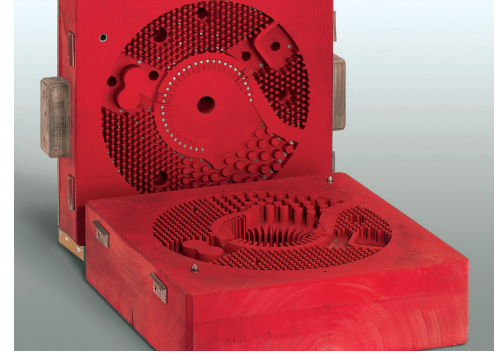
Sika's tooling boards are polyurethane and epoxy-based solutions with densities ranging from 45 – 74 lbs/ft³. These boards provide superior mechanical properties and machining characteristics, and are suitable for a wide range of applications such as checking and holding fixtures, vacuum forming molds, metal forming molds, foundry patterns, core boxes, composite lay-ups, and more.



Sika's tooling board range includes the epoxy-based SikaBlock® M974 (blue), and the polyurethane-based boards SikaBlock® DP151 (gray), SikaBlock® PP152 (red), and SikaBlock® LAB 850 (red).



SikaBlock® M974 is an epoxy-based board that offers high temperature resistance with excellent dimensional stability, due to its low coefficient of thermal expansion.



SikaBlock® PP152 and SikaBlock® LAB 850 are extremely durable boards with high abrasion resistance, making them excellent choices for foundry pattern and core box applications.

TOOLING BOARD PRODUCTS	SIKABLOCK® M974	SIKABLOCK® DP151	SIKABLOCK® PP152	SIKABLOCK® LAB 850
Technology	Epoxy	Polyurethane	Polyurethane	Polyurethane
Color	Light Blue	Gray	Red	Red
Density (lbs/ft ³)	45	52	71	74
Shore D Hardness	74	75	80	80
Glass Transition Temperature (°F)	239	-	-	176
Coefficient of Thermal Expansion (ppm/°F)	20	28	36	53
Heat Deflection Temperature (°F)	-	188	140	-
Flexural Strength (psi)	4,700	7,180	12,800	8,300
Compressive Strength (psi)	7,400	7,420	4,051	5,900
Board Adhesive	SikaBiresin® CR128	SikaBiresin® B177	SikaBiresin® B177	SikaBiresin® B177
Repair Paste	-	SikaBiresin® AP017	TCC-5220	TCC-5220
Applications	■ Master models ■ Direct-to-mold epoxy prepreps ■ Intermediate-to-high temperature lay-up tools and parts ■ Thermoforming tools	■ Checking and holding fixtures ■ Vacuum forming molds ■ Low-volume foundry patterns ■ Headliner tools	■ Foundry patterns ■ Metal forming molds ■ Vacuum forming molds ■ Headliner tools ■ Checking and holding fixtures	■ Foundry patterns ■ Metal forming molds ■ Vacuum forming molds ■ Headliner tools ■ Checking and holding fixtures

BOARD ADHESIVES AND REPAIR PASTES

ADHESIVE AND REPAIR PASTE PRODUCTS	SIKABIRE SIN® B177	SIKABIRE SIN® CR128	SIKABIRE SIN® AP017	SIKABIRE SIN® AP034	TCC-5220
Application	Adhesive	Adhesive	Repair Paste	Repair Paste	Repair Paste
Technology	2-C Epoxy	2-C Epoxy	2-C Polyester	2-C Polyester	2-C Polyurethane
Hardener(s)	G102 G104	CH128-2 CH128-4	BPO Cream Hardener	BPO Cream Hardener	TCC-5220
Mixed Color	Light Amber	Clear	Gray	Brown	Red
Shore D Hardness	75 - 80	88*	80	60	80 - 85
Density (lbs/gal)	8.8	9.5 -	13.3	5.1	8.6
Pot Life (min)	5 - 10 15 - 20	35 - 50 120 - 140	5 - 7	4 - 6	3
Recommended Board(s)	■ SikaBlock® M600 N ■ SikaBlock® M700 N ■ SikaBlock® DP151 ■ SikaBlock® LAB 850 ■ SikaBlock® PP152	■ SikaBlock® M974	■ SikaBlock® DP151	■ SikaBlock® M600 N ■ SikaBlock® M700 N	■ SikaBlock® LAB 850 ■ SikaBlock® PP152

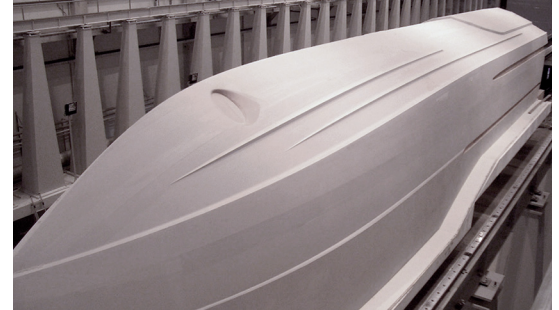
* Value based on room-temperature cure followed by post-cure. See Product Data Sheet for specific post-cure schedule.

TOOLING PASTES

Epoxy-Based, Extrudable Pastes for Models and Molds

Sika's tooling pastes are two-component, epoxy-based solutions designed for the creation of large models, mock-ups, master plugs, and composite tools. These systems are applied in layers onto lightweight substructures, such as low-density foam or EPS, and are easily milled via CNC machining to provide models and tools of the highest quality. The SikaBiresin® SC range of extrudable pastes is well-suited for applications in a wide range of markets, such as aerospace, architecture, automotive, marine, transportation, and wind energy.

Compared to tooling boards, Sika's extrudable tooling pastes provide lighter models with a seamless surface, free of bond lines. They also enable time savings in mold production, due to their ability to be applied in a single-layer and machined within 16-48 hours after application.

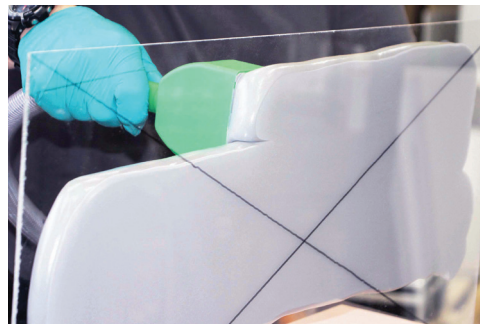


TOOLING PASTE PRODUCTS	SIKABIRESin® SC155	SIKABIRESin® SC175	SIKABIRESin® SC180	SIKABIRESin® SC390
Technology	2-C Epoxy	2-C Epoxy	2-C Epoxy	2-C Epoxy
Hardener	SikaBiresin® SC155	SikaBiresin® SC175	SikaBiresin® SC180	SikaBiresin® SC390
Mix Ratio (Parts by Weight)	100R / 100H	100R / 100H	100R / 100H	100R / 100H
Color	Gray	Orange	Orange, Off-Gray	Gray
Density (lbs/gal)	4.5	5.2	6.6	8.9
Shore D Hardness	51*	51	59	75*
Compressive Strength (psi)	1,360*	1,670	3,600	5,200*
Compressive Modulus (psi)	48,000*	68,890	45,000	-
Tensile Strength (psi)	1,100*	1,000	1,449*	3,000*
Tensile Modulus (psi)	45,000*	114,700	188,370*	348,000*
Flexural Strength (psi)	1,625*	2,025	2,100	5,200*
Flexural Modulus (psi)	66,000*	107,900	136,000	290,000*
Glass Transition Temperature (°F)	140*	131, 181*	149, 180*	196*
Coefficient of Thermal Expansion (ppm/°F)	49*	46	41	31*

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



Sika's tooling pastes are applied via bulk dispensing equipment to lightweight substructures, such as low-density foam or EPS.



Sika's extrudable pastes offer excellent non-sagging properties, and can be applied in a single layer (up to 1.20 in) on vertical surfaces.



The SikaBiresin® SC range provides easy milling with minimal waste, resulting in the formation of chips, as opposed to dust.

REPAIR FILLERS FOR EXTRUDABLE PASTES

REPAIR FILLER PRODUCTS	Technology	Hardener	Mixed 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 SikaBiresin® SC175.

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 epoxy and polyurethane resins, we aim to provide our customers with best-in-class materials and sales support to enable their consistent technical and commercial success.

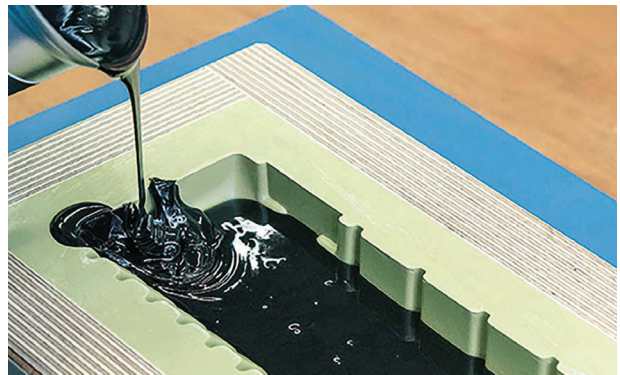
Sika Advanced Resins offers solutions for every stage of composite manufacturing, from the model and prototype phase, all the way to final part production. Our products are trusted worldwide across a wide range of industries, such as automotive and transportation, marine, aerospace, sports and leisure,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

OUR CORE COMPETENCIES



TOOLING BOARDS AND PASTES

Sika offers a complete portfolio of high-performance tooling boards and paste systems for model and mold manufacturing, providing users with easy-to-machine solutions that provide excellent surface 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, vacuum forming molds, foundry patterns, and sheet metal forming tool applications.



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 excellent application properties and bond well to all common fabric reinforcements, resulting in high-grade composites with superior strength properties.



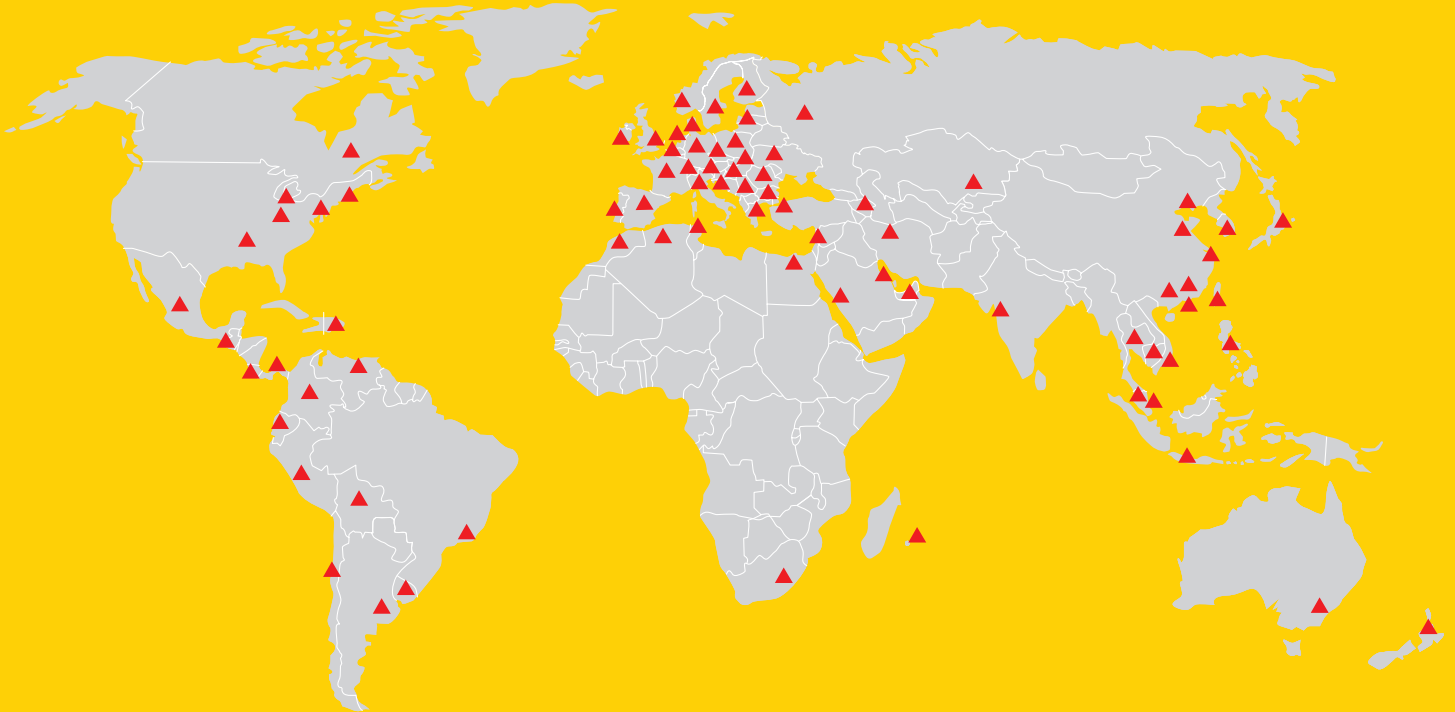
FILLING AND FAIRING COMPOUNDS

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.



Scan to learn more about Sika's
tooling and composite solutions!

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SIKA ADVANCED RESINS. A PARTNER YOU CAN TRUST.

Building trust is paramount in our aim to provide our customers with industry-leading solutions and sales support. Pro's Choice is a leading manufacturer of composite-based, custom-fit, goalie masks. Scan the QR code below to hear from owner, Dom Malerba, as to why he trusts Sika's epoxy lamination systems to help ensure his masks perform to the highest safety and quality standards.



Scan to see our
partnership and
products in action!



Our most current General Sales Conditions shall apply.
Please consult the Data Sheet prior to any use and processing.



BUILDING TRUST

