



AUTHORIZED SIKA DISTRIBUTOR PRODUCT SELECTOR GUIDE FOR METALS

BUILDING TRUST



METAL BONDING

PART 1: ELASTIC BONDING, SEALING AND DAMPING SOLUTIONS

Sika offers a wide range of technologies and products for bonding, sealing and damping of all kinds of metals and alloys in accordance with the most severe and demanding specifications. From generic component sealing to structural bonding to replace rivets, bolts and mechanical fixtures, our applications are used

in the automotive environment, generic industrial components and machinery, construction and furniture elements and appliances and housewares manufacturing. This guide provides general selector guidance. Always consult the most actual Product Data Sheets prior to product usage or consult your Sika contact.

YOUR APPLICATION	Elastic joint						Seam Sealing	Damping application	
	Removable sealing		Permanent bonding and sealing				Spray application	Preformed panels	Sprayable or manual application
	Formed in place sealing	Preformed	Generic sealing and bonding	High strength and weathering resistance reduced pretreatment	Immediate high grab	Approved for incidental food contact			
SIKA SOLUTION	SikaLastomer®-710	SikaLastomer®-95	Sikaflex®-521 UV	Sikaflex®-552 AT	Sikaflex®-545	Sikaflex®-522	Sikaflex®-529 AT	SikaDamp®-620	Sikagard®-6682
Chemistry	Butyl-based sealant	Butyl-based tape	1-component STP	1-component STP	1-component STP	1-component STP	1-component STP	Mastic tape	Water-based acrylic dispersion
Color	Black, grey, white	Grey	Black, grey, white	White, black	White	Black, light grey, steel grey, white	Black ochre	Grey	Dark grey
Shore hardness	-	-	40 A	50 D	45 A	40 A	30 A	-	-
Skin time	10 to 30	-	30	30	15	30	20	-	300
Open time (min)	-	-	-	-	10	-	-	-	-
Tear propagation resistance (N/mm)	-	-	5.5	15	7	7.5	2	-	-
Tensile strength (MPa)	-	-	1.8	3	2.5	1.8	1	-	-
Elongation at break (%)	-	1100	400	600	400	400	200	10	-
Service temperature (°C)	-40 to +80	-40 to +100	-40 to +90	-40 to +90	-40 to +90	-40 to +90	-40 to +90	-40 to +80	-40 to +120

PRODUCT DESCRIPTION

SikaLastomer®-710

is a pasty, non-sagging, on a butyl paste based sealant which contains solvents. It is suitable for plastic sealing of joints in many industrial sectors such as car, bus, truck and caravan industry. SikaLastomer®-710 is used when there is the possibility of future disassembly.

SikaLastomer®-95

is a high performance, tacky elastic butyl tape. Specifically developed for sealing critical Standing Seam Roof (SSR) endlaps and lap joints for metal building roofs, skylights, roof curbs, smoke vents, air conditioning equipment, curtain wall joints and perimeter areas around windows and doors. Sealing exterior lap joints of grain storage bins and sealing the base to the concrete pad. Designed for sealing polyethylene sheeting, metal sewer pipes, exposed and concealed exterior lap joints of aluminum, steel, coated metals, wood, roof rails and door hinges in transport equipment, waterproof rivet seams and lap seams in truck trailers and RVs.

Sikaflex®-521 UV

adheres well to a wide variety of substrates and is suitable for elastic sealing and bonding. Suitable substrate materials include timber, metals, metal primers and paint coatings (2-C systems), ceramic materials and plastics. Seek manufacturer's advice before using on transparent materials that are prone to stress cracking.

Sikaflex®-552 AT

is suitable for joints subjected to dynamic stresses. Suitable substrate materials are metals, particularly aluminum, metal primers, paint coatings, sheet steel, ceramic materials and plastics. Seek manufacturer's advice before using on plastics that are prone to stress cracking.

Sikaflex®-545

is a low emission 1-component Silane Terminated Polymer (STP) assembly adhesive. It has a unique high initial grab with high load capacity and excellent workability. It bonds well to a wide range of substrates with minimal pre-treatment.

Sikaflex®-522

is a low emission 1-component Silane Terminated Polymer (STP) sealant/adhesive. It has a high weathering, fungus and mold resistance. Sikaflex®-522 meets highest EHS standards as well as hygiene requirements for ventilation and air-conditioning systems and units according VDI 6022 1:2011-07. It has ISEGA certificate for foodstuff area usage and EC1+ certificate. It bonds well to a wide range of substrates with minimal pre-treatment. It withstands 4 hours at 140 °C and 1 hour at 150 °C.

Sikaflex®-529 AT

is designed for use as a sprayable elastic sealant for seam sealing and lap joints in collision repair and vehicle body construction. Where applied, Sikaflex®-529 AT improves the resistance against stone chip and other attacks to the car body. Sikaflex®-529 AT adheres well to all the materials commonly used in body shops, e.g. metal primers and paint coatings, metals, painted plastics and plastics. It withstands 4 hours at 120 °C and 1 hour at 140 °C.

SikaDamp®-620

is non-curing and lightweight self-adhesive mastic used for reduction of impact noise, e.g. driven rain and hail grains, and structure borne vibration. Processed with an aluminum constraining layer, this material can be die cut into customized shapes and sizes specific for each application.

Sikagard®-6682

is a solvent-free, 1-component underbody coating with excellent sound deadening properties. It has excellent acoustic properties, high resistance to abrasion, good sag resistance. Overpaintable and easy to apply.

*For Sikaflex® grades 2xx and 5xx, please refer to Sika Pretreatment Chart.

METAL BONDING

PART 2: RIGID BONDING SOLUTIONS

Sika offers a wide range of technologies and products for bonding, sealing and damping of all kinds of metals and alloys in accordance with the most severe and demanding specifications. From generic component sealing to structural bonding to replace rivets, bolts and mechanical fixtures, our applications are used

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YOUR APPLICATION	Rigid joint			
	Aluminum assembly	Generic metal bonding		
	Overpaintable, for aluminum elements	Higher strength, slow curing	High performance, medium curing speed	Fast curing and excellent impact resistance

SIKA SOLUTION	SikaForce®-7900	SikaPower®-1277	SikaPower®-880	SikaFast®-555 L03 / L05 / L10
Chemistry	2-component polyurethane	2-component epoxy	2-component epoxy	2-component acrylic
Color	Cream white	Light red	Grey	Grey
Shore hardness	63 D	80 D	70 D	50 D
Mix ratio by volume	1:1	2:1	1:1	10:1
Open time (min)	30	60	45	3 / 5 / 10
Tensile strength (MPa)	10	30	22	11
Fixing time (min)	-	660	300	9 / 15 / 25
Service temperature (°C)	-40 to +80	-	-	-40 to +80

PRODUCT DESCRIPTION

SikaForce®-7900 is suitable for corner bonding of powder coated and anodized aluminum frames and sash frame profiles, usually used for windows, doors and facade's or other aluminum constructions.

SikaPower®-1277 is a structural 2-component epoxy adhesive, which cures at room temperature. It is designed for high strength and impact-resistant bonding of metallic substrates, like steel and aluminum, as well as of composite substrates, like GFRP and CFRP laminates. The adhesive has good non-sag properties and contains glass beads of 0.3 mm to ensure an optimal bonding thickness. Heat accelerates curing and allows a higher mechanical strength. It can also be used for repair applications in combination with spot welding, riveting or clinching. The product is applied as contact adhesive (2-side application).

SikaPower®-880 is a thixotropic, fast curing, gap-filling 2-component epoxy adhesive, which cures at room temperature. It is designed for use in structural joints, where toughness and high strength are required. SikaPower®-880 is particularly suitable for bonding metallic substrates, like steel and aluminium, as well as composite substrates, like GFRP and CFRP laminates. It has very good application properties and shows elevated impact, heat and environmental resistance. Contains glass beads of 0.3 mm to ensure optimal bonding thickness, it can also be used for repair applications as well as in hybrid joints in combination with spot welding, riveting or clinching.

SikaFast®-555 L03 / L05 / L10 is an acrylic based, fast curing, flexibilized structural, 2-component adhesive. It has a pasty-like consistency allowing for vertical and horizontal, easy and precise application. It is suitable to replace mechanical fixation and provides very good adhesion on various substrates such as metals, plastics, glass and wood. It is available with 3 minutes (L03), 5 minutes (L05) and 10 minutes (L10) open time.



APPLICATION EXAMPLES

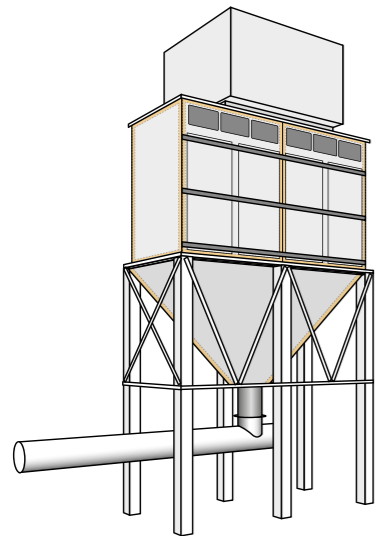
Whether a structural bond or a generic sealing is needed, Sika offers a wide range of solutions suitable for the whole assembly process while satisfying the most demanding market requirements. Manufacturers of air conditioning systems rely on Sika's technologies to bond, seal and soundproof metal bodies and frames in filter systems, achieving thus cost-optimization and long-term results.

ADVANTAGES

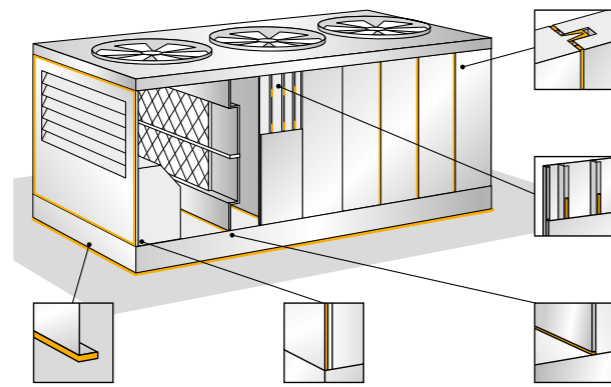
- High load-resistant solutions
- No welding process and metal buckling
- No unaesthetic mechanical fixtures
- Sound damping
- Sealing and bonding in one step
- Improved system performance
- Reduced assembly time

PRODUCT FEATURES

- Sikaflex® and Sikasil® solutions: structural adhesives and sealants
- Assembly performance: Sikaflex®-552 AT and Sikaflex®-953
- UV-resistant and primer-free solutions: Sikasil® AS-70 and Sikasil® AS-785
- Fungus- and mold-resistant (VDI 6022 / ISO 846): Sikaflex®-522
- Gap filling and short handling time with the 2-component technology of Sikaflex®-953 and Sikasil® AS-785



Metal frame sealed and bonded with **Sikaflex®-268**. For primer-free applications, **Sikasil® AS-70** or the fast cure **Sikasil® AS-785** are advised.

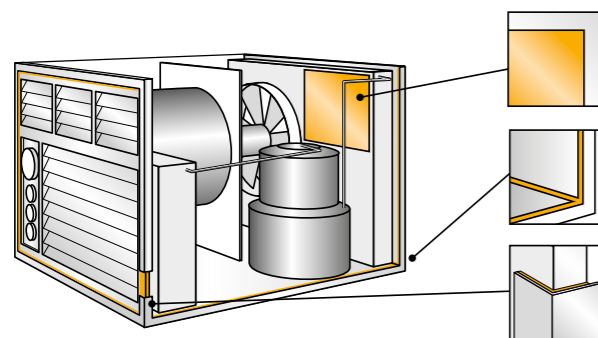


1. Joining of wall panel: **Sikaflex®-252**.

2. Bonding of wall panels: **Sikaflex®-552 AT** or **Sikaflex®-522** if hygiene requirements must be met.

3. Seam sealing: **Sikaflex®-522** or **Sikaflex®-221 RLT** fulfills hygiene requirements for HVAC systems.

5. Perimeter sealing: **SikaLastomer®-710**. 4. Structural corner bonding: **Sikaflex®-552 AT**.



1. Vibration damping: **SikaDamp®-620**.

2. Seam sealing: **Sikaflex®-522** or **Sikaflex®-221 RLT** fulfills hygiene requirements for HVAC systems and equipments.

3. Structural corner reinforcements: **Sikaflex®-552 AT**. For faster curing, **Sikaflex®-950** and **Sikaflex®-953 AF** can be used.



APPLICATION EXAMPLES

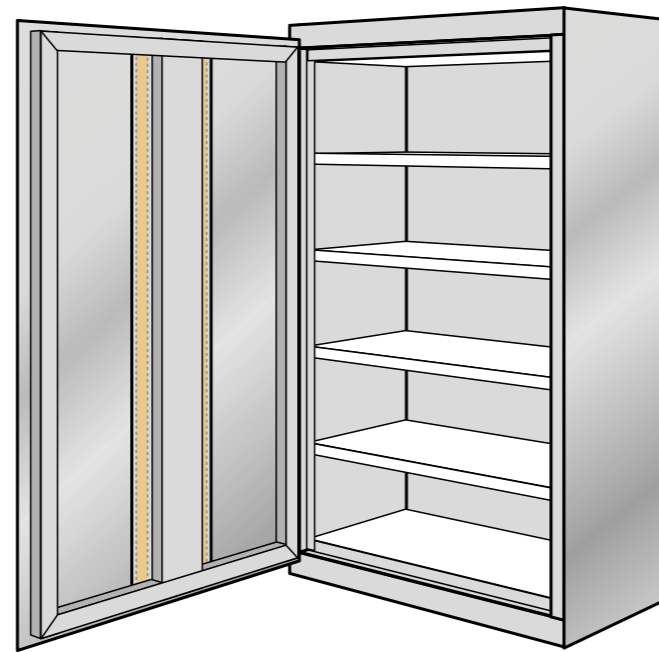
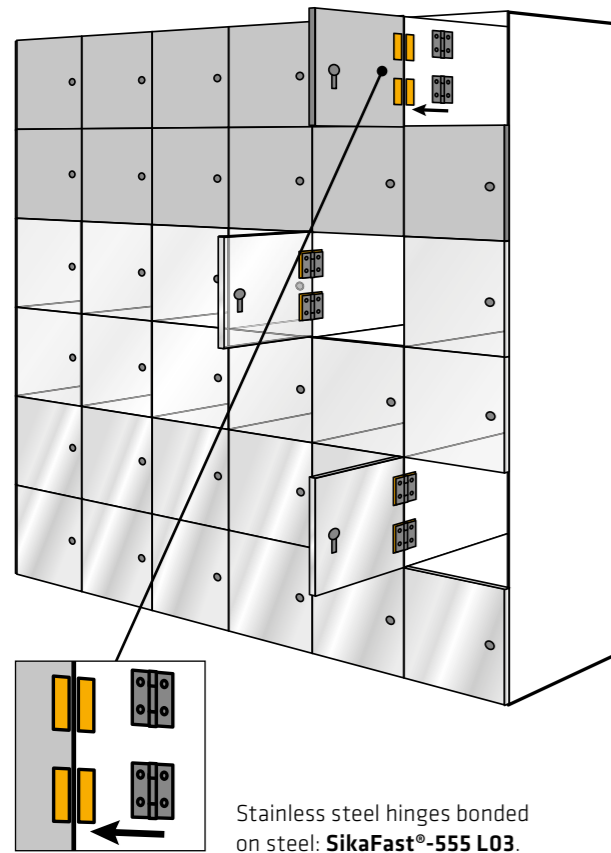
When a structural bond and a pleasant look have to be achieved at the same time, Sika's technologies provide the right answer. Our products meet the most demanding market requirements, providing competitive advantages and long-term results. Our solutions fully satisfy metal furniture production needs: stiffeners and metal hinges are structurally bonded on door and panel materials such as wood, plastics and metals with a safe and aesthetic bond.

ADVANTAGES

- No welding process and metal buckling
- High load-resistant solutions
- No corrosion caused by screw holes and rivets
- Sleek design without visible clamps or screws
- One solution for all process materials
- Easy and fast assembly process

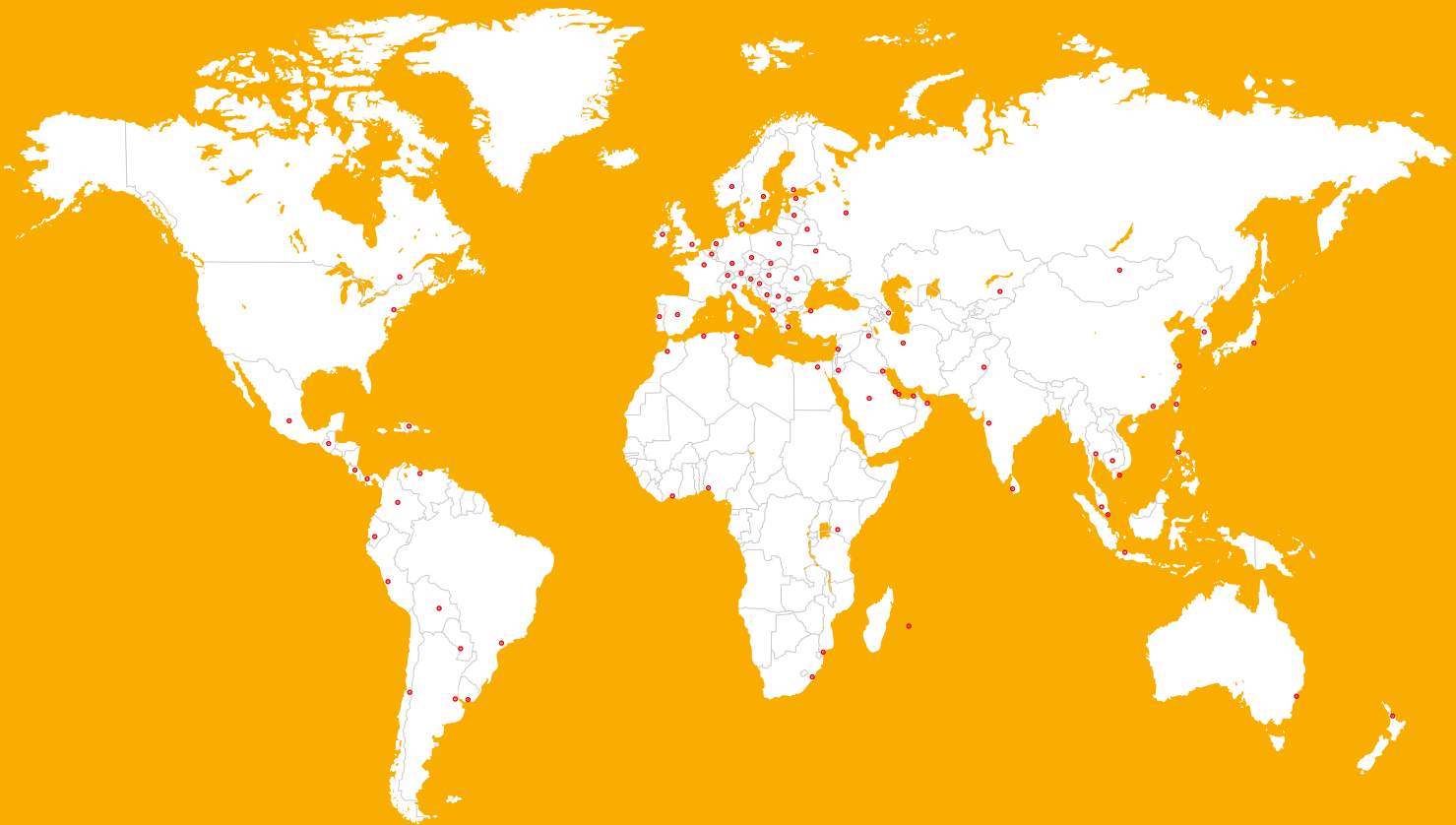
PRODUCT FEATURES

- Structural adhesives and sealants
- Gap filling and short handling time with the 2-component technology of Sikaflex®-953 and SikaFast®-555
- Suitable for a wide range of substrates
- Optimized both for large and small scale industrial applications
- SikaPower®-880 and SikaFast®-555: cold-curing structural solutions with a very high impact resistance and fast curing



NOTES

GLOBAL BUT LOCAL PARTNERSHIP



LEGAL NOTES

The information, and, in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product's suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.

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



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