



EXPERTS' CHOICE

FOR VEHICLE MANUFACTURING

SIKA ADHESIVES AND SEALANTS
UPGRADE FOR VEHICLE
MANUFACTURING

BUILDING TRUST



UPGRADE YOUR VEHICLE DESIGN AND ASSEMBLY PROCESS WITH SIKA

INCREASING CUSTOMER DEMANDS, increasing competition, and dynamic market trends require vehicle manufacturers to upgrade assembly and design constantly. Based on vehicle manufacturers' typical challenges, Sika offers specific solutions to increase production output and make vehicles lighter and more durable.

PROCESS EFFICIENCY



CHALLENGES

- Increasing the output in production
- Reducing process times
- Reducing production costs
- Ensuring traceability

SIKA UPGRADE FOR MORE EFFICIENT PROCESSES

- Accelerated PowerCure adhesive systems
- Simpler surface preparation
- Versatile adhesives and sealants
- Data Matrix Code (DMC) for traceability
- LUM Surface Preps for better in-process control

LIGHTWEIGHT DESIGN



CHALLENGES

- Reducing vehicle weight
- Increasing vehicle pay-load
- Reduced fuel consumption
- Using lightweight construction materials

SIKA UPGRADE FOR LIGHTER VEHICLES

- Mixed material vehicle design
- Structural reinforcement with bonded composites
- Bonding thin-walled components
- Avoiding peak stress

DESIGN



CHALLENGES

- Reducing energy consumption
- Appealing appearance
- Customer demands for individual designs

SIKA UPGRADE FOR MORE CONTEMPORARY DESIGNS

- Smooth outer contours
- Modern designs thanks to adhesive technology
- Greater freedom of design by greater material mix

ENVIRONMENT, HEALTH, SAFETY



CHALLENGES

- Improving occupational safety
- Reducing energy consumption
- Reducing waste volume

SIKA UPGRADE FOR GREATER SAFETY

- Sikaflex®-500 Series without hazard labeling
- Reduced waste by using pouch packaging
- Primerless adhesive bonding

DURABILITY



CHALLENGES

- Reducing total cost of ownership
- Increasing vehicle service life
- Higher customer satisfaction
- Avoiding corrosion

SIKA UPGRADE FOR ENHANCED QUALITY

- Safe and faster curing with Sikaflex® booster technology
- The protective coating layer stays intact with adhesive bonding
- Better stress distribution avoiding peak stress

UPGRADE FOR VEHICLE MANUFACTURING

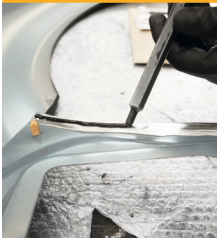
SIKA SOLUTIONS AT A GLANCE

STRUCTURAL ASSEMBLY BONDING



- **Sikaflex®-554 PowerCure**
fast cure and high strength bonding
- **Sikaflex®-545**
for bonding with high initial grab
- **Sikaflex®-554**
for high strength bonding

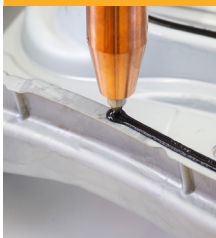
BRACKET BONDING



- **SikaFast®-555**
for bonding various components and plastic parts



METAL BONDING



- **SikaPower®-880**
for bare and coated metal bonding

Pre-treatment and
processing equipment
information on pages 12–15

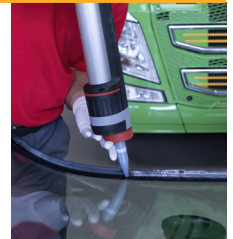
SEALING

- **Sikaflex®-521 UV**
for visible joints indoors
and outdoors



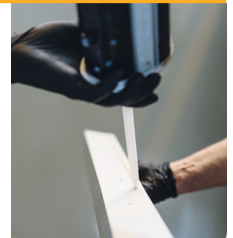
GLASS AND WINDSHIELD BONDING

- **Sikaflex®-271 PowerCure**
for mineral glass
- **Sikaflex®-223 PowerCure**
for organic / plastic glass



SANDWICH PANEL ASSEMBLY

- **SikaForce®-420**
for structural assembly
of sandwich panel boxes



NEW

PP HONEYCOMB PANEL ASSEMBLY

- **Sika® Primer-518 PP + Sikaflex®-552 AT**
for non-treated polypropylene panels



SAFER AND EASIER PROCESSING

Sikaflex[®]-500 SERIES

Sikaflex[®]-500 SERIES PRODUCTS HAVE have a proven track record in all kinds of adhesive bonding and sealing applications in industrial manufacturing. The Sikaflex[®]-500 Series is based on Sika's own Silane Terminated Polymer (STP) Technology, which combines the high strength and durability of polyurethanes with sustainability and easy processing.

Sikaflex[®]-500 SERIES PRODUCTS



PERFORMANCE

Their unique structure makes them stronger and longer-lasting than typical SMPs



EASY TO USE

They are simple to process and bond well to a large variety of materials without using a primer



WORK SAFETY

They are free of isocyanates and other hazardous substances



THE ALL-ROUNDER

Sikaflex®-521 UV

- Primerless versatile adhesive sealant
- For indoor and outdoor use
- ISEGA certified for foodstuff area usage



THE HIGH GRAB EXPERT

Sikaflex®-545

- Instantly holds large components in place
- Reduces need for spacers and tapes
- Primerless adhesion on many substrates



THE STRENGTH EXPERT

Sikaflex®-554

- Higher strength for load bearing applications
- Ideal for applications with dynamic stress
- Primerless adhesion to many substrates



THE SPEED EXPERT

Sikaflex®-554 PowerCure

- Fast strength development
- High strength bonding for load bearing joints
- Primerless adhesion to many substrates



FASTER ASSEMBLY WITH Sikaflex® Booster AND PowerCure

Sikaflex® Booster AND PowerCure enables fast and secure adhesive bonding. Adding a booster paste accelerates and safeguards the adhesive's curing. It only takes a single processing device – the PowerCure dispenser.

The PowerCure dispenser is as powerful and accurate as a modern pumping and dosing system used in industrial production.

POWERCURE TECHNOLOGY KEY FACTS



BOOST PROCESS SAFETY

- Reliable curing, even at low ambient temperature
- Faster handling



SIMPLE AND FLEXIBLE

- Ready for use quickly
- Mobile
- Up to 2x more output than regular 2C adhesives



LESS WASTE

- Up to 60% less packaging waste compared with regular 2C adhesives



STRUCTURAL PANEL ASSEMBLY

Sikaflex®-554 PowerCure

- Fast strength development
- High strength bonding for load bearing joints
- Primerless adhesion to many substrates
- Also available as 1C and bulk booster option

Handling
strength in
2 HOURS



GLASS BONDING AND REPLACEMENT

Sikaflex®-271 PowerCure

- Fast process thanks to accelerated adhesive system
- Ready to operate in 90 min (Drive Away Time)
- Adequate processing time for large and special panes
- Also available as 1C and bulk booster option

Ready to
use in
90 MINUTES



ORGANIC / PLASTIC GLASS BONDING

Sikaflex®-223 PowerCure

- High elasticity for reduced stress
- Prevents stress cracking on organic glass
- Sealing and bonding with one product
- Also available as 1C and bulk booster option

Handling
strength in
3 HOURS



DURABLE AND ROBUST STRUCTURAL ADHESIVES

Sika's **STRUCTURAL ADHESIVES** increase vehicle stiffness and prolong service life. They provide even faster curing than Sikaflex® solutions and require only minimal surface preparation.

SIKA STRUCTURAL ADHESIVES



LONGER LASTING VEHICLES

Structural adhesives reduce peak stress compared with mechanical fasteners



READY FASTER

Fast cure adhesives with long working time allow faster part handling



MINIMAL EXPOSURE

Adhesive solutions that bond permanently with minimal surface preparation



BRACKET AND COMPONENT ASSEMBLY

SikaFast®-555

- Easy handling with minimal surface preparation
- Bonds a wide range of materials
- Very fast strength development for fast handling



ADHESIVE FOR METAL BONDING

SikaPower®-880

- Prevents corrosion between bonded components
- Bonds coated and bare metal
- Glass beads ensure minimum layer thickness



SANDWICH PANEL ASSEMBLY

SikaForce®-420

- Ideal for large panel assembly
- Primerless adhesion to common materials
- Thixotropic and non-sagging



INSTRUCTION OF USE SURFACE PREPARATION

GENERAL GUIDANCE AND PRECONDITIONS FOR USING SIKA ADHESIVES AND SEALANTS



- All Surfaces must be clean, dry and free of grease, oil, and dust prior bonding
- Adhesion performance must be verified on original substrates
- Changes in nature or quality of the substrate/surface require requalification of the process to ensure performance and quality of the bonding

Sikaflex®-500 SERIES ADHESIVES AND SEALANTS

With Sikaflex®-500 series products excellent primerless adhesion can be obtained to many substrates such as metals, coatings, GRP and glass.

- Aluminum
- Steel
- Coatings
- GRP
- Glass



Cleaning
Sika® Cleaner P
(or isopropanol based cleaner)

For load bearing applications and special requirements additional surface preparation is recommended as below:

SUBSTRATE	MECHANICAL	ADHESION PROMOTER
Aluminum (AlMg3, AlMgSi1, anodized)	Abrasive Pad	Sika® Aktivator-205
Steel (stainless, galvanized)		Sika® Aktivator-205
COATINGS: 2C top coats (PUR, Acrylic) Powdercoating (PES, EP/PES) 2C primers (PUR, Acrylic, Epoxy Resin) Cathodic Dip Paint (E-Coat) Coil Coatings		Sika® Aktivator-205
Glass Fiber Reinforced Plastics (gel-coat / lay-up side)	Abrasive Pad	Sika® Aktivator-205
Glass (Glass / Ceramic Print)		Sika® Aktivator-205
Plastics (ABS, PVC)		Sika® Primer-207
Glass Fiber Reinforced PP (Honeycomb panels)		Sika® Primer-518 PP
Wood / Plywood / Wooden Materials		Sika® Primer-207

More details and materials can be found in Sika's Pretreatment Chart for Sikaflex-500 Series.

Sikaflex®-200 SERIES POLYURETHANE WINDSHIELD ADHESIVES

Sikaflex®-223 PowerCure for the installation of plastic glass or Sikaflex®-271 PowerCure for the installation of mineral glass on vehicles require following surface preparation:

CLEANING	PRIMING	ADHESIVE APPLICATION
Sika® Cleaner G+P or Sika® Cleaner P 	Sika® Primer-207 	Sikaflex®-271 PowerCure or Sikaflex®-223 PowerCure 

Remark: Bond area must be protected from UV Light.

SikaFast®-555 for Bracket Bonding:

- Plastics (including ABS, hard PVC, UP, GRP, PA)
- Metals
- Glass
- Painted Components



Cleaning and Activating
Sika® ADPrep

SikaPower®-880 for Bare Metal Bonding:

- Bare Metals



Cleaning
Sika® Cleaner P
(or isopropanol based cleaner)

SikaForce®-420 for Assembly of Sandwich Panels:

- Metals
- Coated Surfaces
- GRP



Cleaning
Sika® Cleaner P
(or isopropanol based cleaner)

Always consult additional information, such as General Guidelines "Bonding and Sealing with Sikaflex®", current Product Data Sheets, Safety Data Sheets, additional Product- and Technical Information, etc. prior to use of the products. Sika technical services provide support for individual projects.

ITEM OVERVIEW

VEHICLE MANUFACTURING

Category	Product	Packaging Size	Color	Box Content	Item Number
Sikaflex® -500 Series Safer and Easier Processing  	Sikaflex®-521 UV The All-Rounder	300 ml cartridge	Black	12 pieces	
		300 ml cartridge	White	12 pieces	
		600 ml pouch	Black	20 pieces	
		600 ml pouch	White	20 pieces	
	Sikaflex®-545 The High Grab Expert	300 ml cartridge	White	12 pieces	
		600 ml pouch	White	20 pieces	
	Sikaflex®-554 The Strength Expert	300 ml cartridge	Black	12 pieces	
		300 ml cartridge	White	12 pieces	
		600 ml pouch	Black	20 pieces	
		600 ml pouch	White	20 pieces	
	Sikaflex®-554	600 ml pouch	Black	20 pieces	
PowerCure Solutions Faster Assembly  	Sikaflex®-554 PowerCure The Speed Expert	600 ml PowerCure	White	14 pieces	
		600 ml PowerCure	Black	14 pieces	
	Sikaflex®-223 PowerCure Organic Glass Adhesive	600 ml PowerCure	Black	14 pieces	
	Sikaflex®-271 Power Cure Windshield Adhesive	600 ml PowerCure	Black	14 pieces	
	Mixed V-Cut	-	-	50 pieces	
	Mixer Round	-	-	40 pieces	
	Power Cure Dispenser	600 ml / EU	-	1 piece	
Structural Adhesives Durable and Robust 	SikaFast®-555 L05	50 ml cartridge	Gray	12 pieces	
		250 ml cartridge	Gray	12 pieces	
	SikaFast®-555 L10	250 ml cartridge	Gray	12 pieces	
	SikaForce®-420	415 ml cartridge	Brown	-	
	SikaPower®-880	400 ml cartridge	Gray	12 pieces	
	SikaFast® 10:1 Gun	-	-	-	
	SikaPower® 1:1 Gun	-	-	-	
	SikaForce® 4:1 Gun	-	-	-	

Surface Preparation



Sika® Aktivator-205	250 ml can	-	6 pieces	
Sika® ADPrep	250 ml can	-	6 pieces	
Sika® Primer-207	250 ml can	Black	6 pieces	
Sika® Primer-518 PP NEW	250 ml can	Clear	6 pieces	
Sika® Cleaner G+P	500 ml trigger	-	15 pieces	
	25 l canister	-	1 piece	
Sika® Cleaner P	1 l can	-	12 pieces	
	5 l canister	-	1 piece	
Sika® Cleaner PCA	168 pieces/box	-	1 box	
Sika® Remover-208	1 l can	-	4 pieces	



GLOBAL BUT LOCAL PARTNERSHIP



WHO WE ARE

Sika AG, Switzerland, is a globally active specialty chemicals company. Sika supplies the building and construction industry as well as manufacturing industries (automotive, bus, truck, rail, solar and wind power plants, facades). Sika is a leader in processing materials used in sealing, bonding, damping, reinforcing and protecting loadbearing structures. Sika's product lines feature highquality concrete admixtures, specialty mortars, sealants and adhesives, damping and reinforcing materials, structural strengthening systems, industrial flooring as well as roofing and waterproofing systems.



FOR MORE INFORMATION

www.sika.com/transportation

www.sika.com/powercure

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



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