

AUTOMOTIVE GLASS  
REPLACEMENT  
SAFETY WITHOUT COMPROMISE

BUILDING TRUST



# THE LEADING BRAND FOR WINDSCREEN ADHESIVES

Sika is a Swiss-based specialty chemicals company with more than 100 years of experience. Sika is the leading manufacturer of windscreen adhesives for both vehicle manufacturers as well as automotive aftermarket. Today Sika is present in over 90 countries and 1 out of 3 windscreens globally is replaced using an adhesive system from Sika.

We are focused on three core values that made us the number one in the global markets: INNOVATION, SIMPLICITY AND SAFETY. Our aim is to simplify the professional application process with reliable and fast curing adhesive systems and short safe drive-away times that maximize the safety of vehicle owners and passengers.



At the time of writing, more than

**300 MILLION**

windscreens have been replaced using Sika adhesives

Over

**30 MILLION**

headlights, sunroofs and spoilers are bonded with Sika adhesives annually

**1 OUT OF 3**

windscreens worldwide is replaced using Sika adhesive

Local Sika presence in over

**90** countries

**50%**

of vehicles produced worldwide use Sika technology

Sika technology saves

**80 MILLION**

liters of fuel annually (240 million kg of CO<sub>2</sub>)

Sika supplies more than

**400 MILLION**

acoustic damping parts per year

# WINDSCREEN VITAL FOR YOUR SAFETY

Initially the windscreen was installed in vehicles to protect occupants from wind and rain. While these are still core functions of the windscreen; requirements advanced over time to allow new vehicle designs become a structural member of the vehicle's body, serve as backboard for the vehicles airbag system and with the newest models function as head up display.

## **SAFETY MATTERS**

When a windscreen gets replaced, a component critically important to the safety and the welfare of the customer, the integrity of the vehicle is touched. The use of wrong products and poor workmanship has resulted in fatal accidents; our aim to reduce them to zero is a key driver of Sika's R&D efforts. At Sika we take safety seriously and continuously work on better and even more reliable solutions. This has been one of the driving forces making Sika the leading brand for windscreen adhesives globally.

## SAFETY RELEVANT FUNCTIONS



**KEEP YOU INSIDE**  
Windscreen & adhesive prevent you from ejection



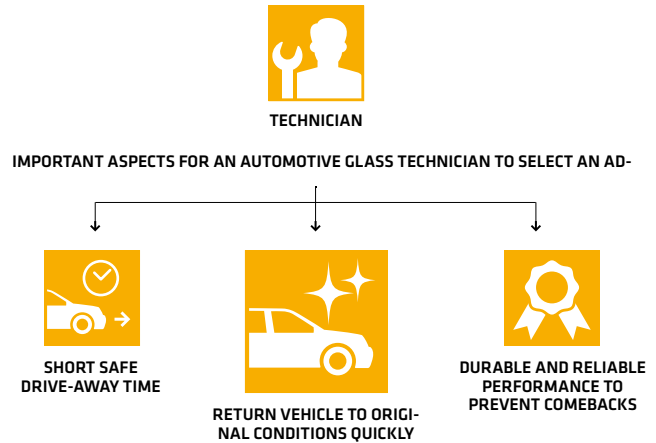
**AIRBAG CAN FUNCTION AS DESIGNED**  
The windscreen serves as backboard for the airbag



**PREVENTS ROOF FROM CRUSHING**  
Windscreen as member of car body prevents roof crush

# WINDSCREEN STRUCTURALLY STRENGTHENS VEHICLE BODY

Over the years, the way a windscreen is fitted to the vehicle body has changed from rubber trims to bonded windscreens. Since the 1980s the windscreen is bonded using high performance polyurethane adhesives. Over time, the requirements for adhesive have advanced, too. These days, the windscreen is structurally bonded to the vehicle body, increasing cabin stiffness and crash safety.



## REQUIREMENTS

- Many OEMs require the vehicle to be back to its original conditions
- Volvo, VW and others require the use of two-component adhesives or much longer waiting time than practiced by automotive glass specialists
- Main area of concern is the torsional stiffness of the vehicle

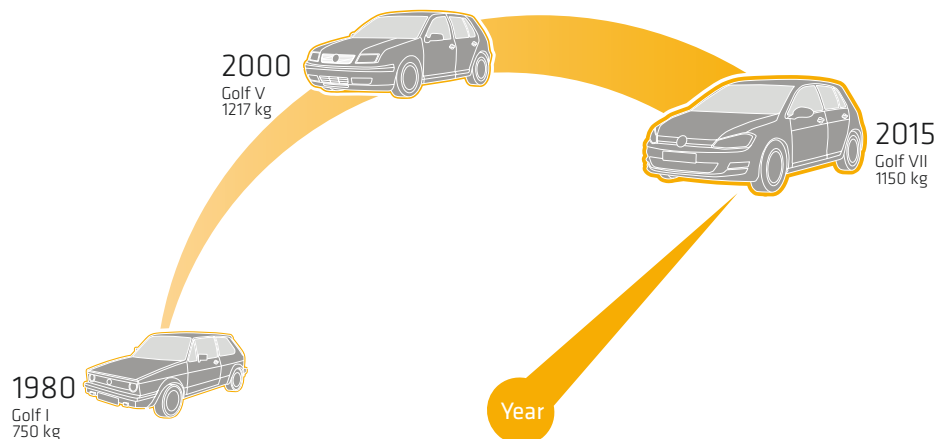
## WINDSCREEN AS STRUCTURAL PART OF THE VEHICLE DESIGN

Vehicle manufacturer follow some key market trends to reduce fuel consumption and achieve higher passenger comfort without increasing vehicle weight.

## VEHICLE DESIGN HAS CHANGED OVER THE YEARS

Modern cars are built out of a range of different materials and different grades of steel. Sika has been pioneering some concepts and provides solutions for body reinforcement. Stiffening the vehicle body has multiple effects like better overall dynamics, improved crash resistance and increased vehicle occupant safety. Modern vehicles take reinforcement effects of windscreens and other components into account so that engineers can reduce metal thickness or utilize different lower weight materials. Often the weight gains are reinvested into additional vehicle comfort.

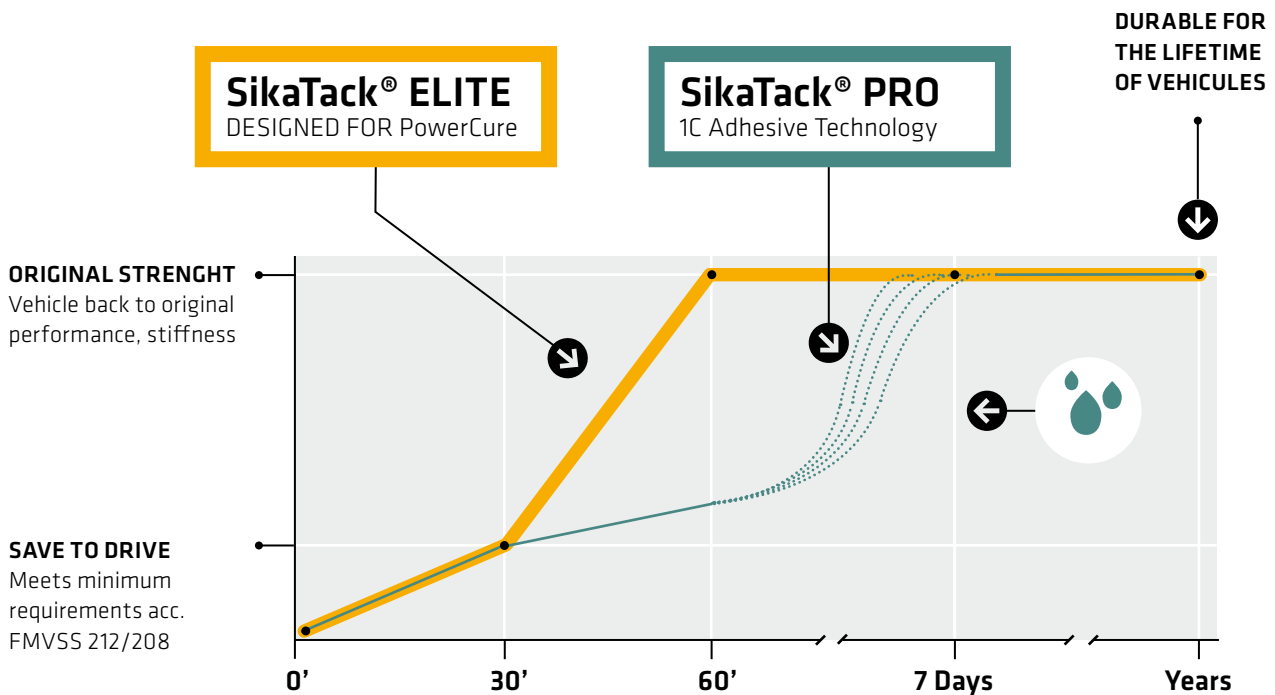
Over time vehicle weight has increased with increasing demands for vehicle safety and comfort. The weight of the VW Golf has increased from about 750 kg of the first generation to more than 1200 kg. Current trend for better fuel efficiency is driving the use of light-weight materials and stronger steel in vehicle design. Bonding technology helps reinforcing the vehicle body structure and saving weight. This is visible with the Golf VII series, whose weight has gone down again to 1150 kg.



# ADHESIVE TECHNOLOGIES FOR WINDSCREEN REPLACEMENT

For most windscreen replacements moisture-curing one-component adhesives are used. These systems are easy to use and allow quickly reaching the minimum safety requirements to put the vehicle back into operation. After the safe drive-away time has passed, the one-component adhesive remains soft inside for about a week, during this period the vehicle body stiffness is compromised.

Car manufacturers apply higher standards and either utilize two-component adhesives, which cure from the inside or they require longer waiting time to reach their safety requirements. Such adhesives are even used on the production line, as only a fully cured adhesive ensures the vehicle is in final shape when it goes through quality control. Sika's PowerCure technology allows reaching original vehicle body stiffness quickly and at excellent comfort for the installer.





# CURED TO OEM LEVEL

Sika's PowerCure adhesives allow a car to be lifted by its windscreen in as little as 60 minutes. This is what we understand practically by adhesives which are cured to OEM level.







# BENEFITS OF POWERCURE ADHESIVES

PowerCure adhesives are curing almost independently of the climate from the inside of the bead. They are cured to the level specified by vehicle manufacturers and reinforce the car body structure to the original level within just minutes, whereas one-component products can require up to weeks depending on the climate.

Body reinforcement is one of the key reasons why some vehicle manufacturers require their service centers to use accelerated or two-component adhesives. There are further benefits going along with the use of PowerCure adhesives:

## CURED TO OEM LEVEL SPECIFICATION

Sika's PowerCure technology allows reaching the performance required by car manufacturers within minutes, it basically allows short waiting time without any compromise in safety and quality. At Sika we call reaching this performance "Cured to OEM Level".



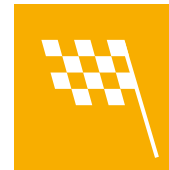
You could even lift a vehicle by its windscreen just 60 minutes after installation.



Comebacks can be repaired instantly without risk of soiling car interiors or long waiting time for vehicle owner



Vehicle is returned to its original shape within minutes



Vehicle can be used without any special restrictions like speed limits, bumpy roads, car testing or curb side parking



Car safety sensors can be calibrated instantly and permanently



Tested for reliability and durability



Insurance and subcontracting work is done meeting all OEM standards





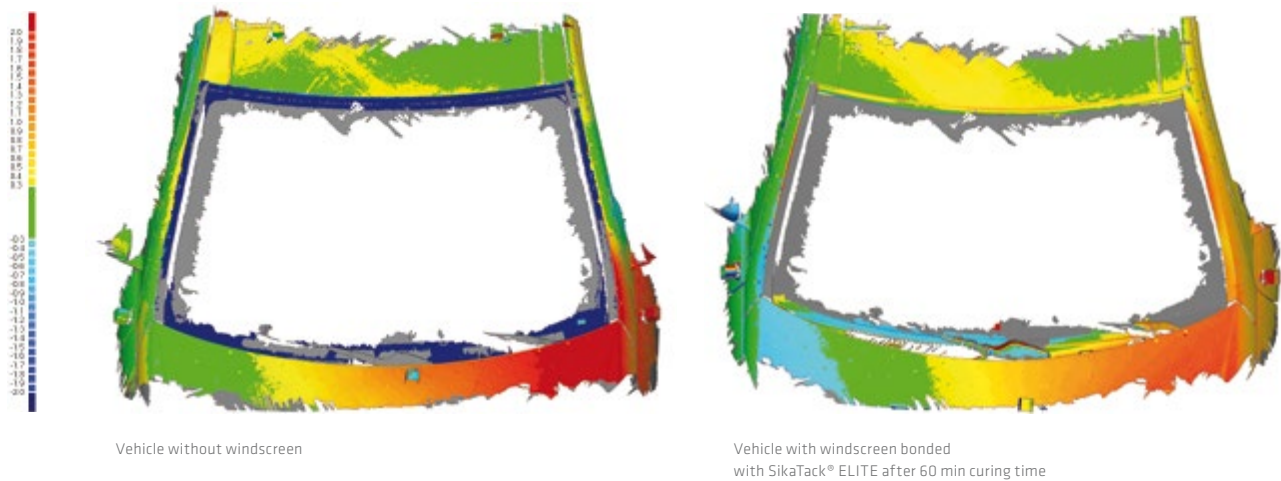
# STIFF AS NEW IN JUST 60 MINUTES

The development of body stiffness on a vehicle was tested with the Dynamic Test Center in Switzerland. The target was to understand how long a PowerCure adhesive requires to restore a vehicle to original conditions. It was intended to measure vehicle body deformation at the maximum axle deformation.

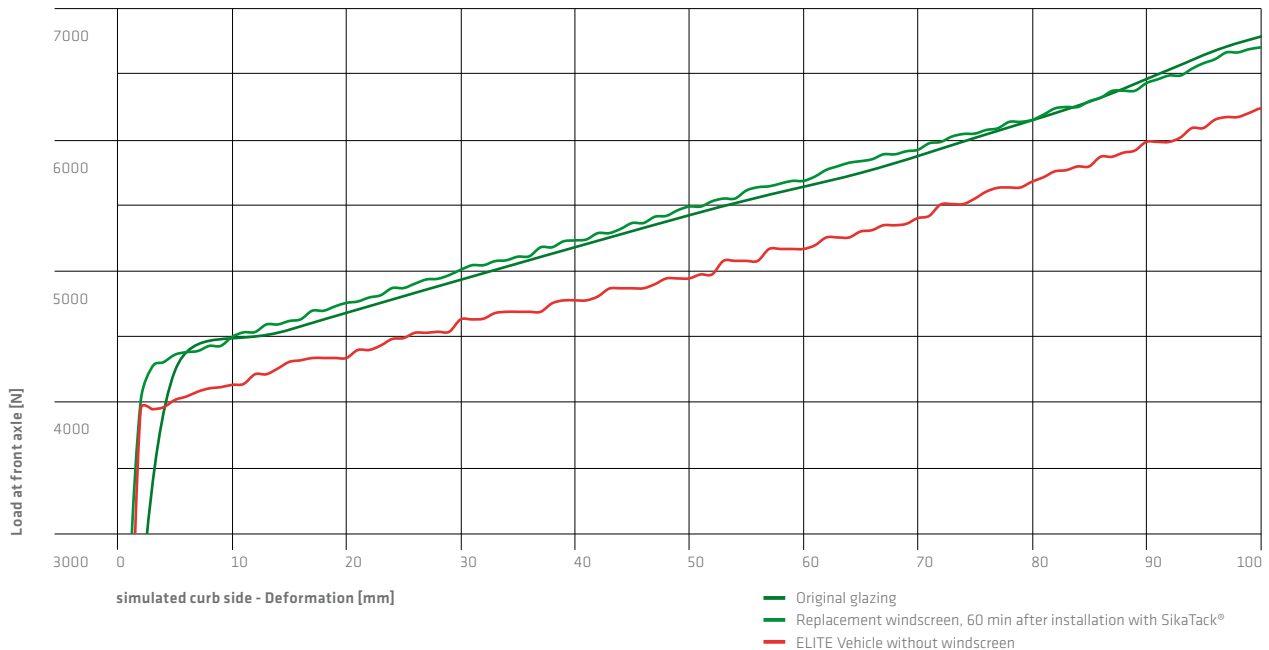
## TEST CONDITIONS

A Mercedes C-Class (2011) with original windscreen was used for the test. The vehicle was chosen as Mercedes is using high modulus adhesives from Sika in the OEM production. The vehicle was fixed at three wheels and deformation was applied to the front wheel on the left side. A deformation of up to 150 mm was applied to simulate body deformation on e.g. curb side parking. The stiffening effect of the original glazing after the installation of SikaTack® ELITE was measured in reference to the vehicle without windscreen.

**TORSIONAL STIFFNESS WITH SikaTack® ELITE IS BACK TO ORIGINAL LEVEL WITHIN JUST 60 MINUTES AFTER INSTALLATION.**



Rigidity of car body with wheels fixed



# WHY PowerCure FOR WINDSCREEN REPLACEMENT

## WHY PowerCure ADHESIVES FOR WINDSCREEN REPLACEMENT?

Having your windscreen installed with PowerCure adhesives ensures your car was returned to its original shape without compromising its safety or quality. Installers using PowerCure from Sika, are well trained and utilize approved techniques to replace windscreens.

With PowerCure adhesives from Sika, your vehicle is returned to its original conditions meeting all relevant safety standards within minutes. **We keep it safe and simple.**

## ADDITIONAL VALUE OF SikaTack® ELITE TO OFFER OUT- STANDING SERVICE AT BEST QUALITY

- Best service for fleets and rental cars: no limitations in using the vehicle
- With SikaTack® ELITE opening hours can be extended by one more job a day
- Customer may prefer to wait for the installation to complete, allowing a drive-thru type of business
- Enriched offer with other service elements to allow speedy service



Comebacks can be repaired instantly without risk of soiling car interiors or long waiting time for vehicle owner



Vehicle can be used without any special restrictions like speed limits, bumpy roads, car testing or curb side parking



Insurance and subcontracting work is done meeting all OEM standards



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# SIKA FULL RANGE SOLUTIONS FOR CONSTRUCTION:



**LIQUID APPLIED ROOFING**



**SINGLE PLY ROOFING**



**CONCRETE**



**CONCRETE REPAIR**



**STRUCTURAL STRENGTHENING**



**WATERPROOFING**



**JOINT SEALING**



**FAÇADE STRUCTURAL ADHESIVES**



**FLOORING**



**INDUSTRY**



**DISTRIBUTION**



**BUILDING TRUST**

## FOR MORE INFORMATION:



### WHO WE ARE

Sika Limited and Sika Ireland Limited are part of the global Sika Group, specialising in the manufacture and supply of chemical based products. Sika have a leading position in the development and production of systems and products for bonding, sealing, damping, reinforcing, and protecting in the building sector and the motor vehicle industry. Sika has subsidiaries in 101 countries around the world and manufactures in over 200 factories. With more than 20,000 employees Sika generates annual sales of CHF 7.09 billion (£5.45bn). We are also committed to providing quality, service, safety and environmental care.

In the UK and Ireland, we provide market-leading solutions for concrete, waterproofing, roofing, flooring, refurbishment, sealing & bonding, and industry, and have manufacturing sites in Welwyn Garden City, Preston, Leeds and Dublin with more than 870 employees and a turnover of more than £260 million.

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 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 proprietary rights of third parties must be observed. Please refer to our homepage [www.sika.co.uk](http://www.sika.co.uk) for our current standard terms & conditions applicable to all orders. Users should always refer to the most recent issue of the Product Data Sheet for the product concerned, copies of which will be supplied on request.



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