



# **Volvo Genuine Windscreens & Windscreen Adhesives**

**Functionality and Advantages**



# Volvo Genuine Windscreens

Understanding the strength and safety that Volvo Genuine Windscreens provide

## An Overview of the Importance of the Windscreen

We don't often think of it, but the windscreen is one of the most important safety systems in your car. It not only has to ensure an undistorted view of what's in front of you, but it is also a critical component in the structural strength of the body of the car.

The properties of the windscreen affect the way the car deforms in a collision and its strength is vital to help maintain the structural integrity of the car. It must support the airbag on the passenger side (which is designed to use the windscreen as a support when deployed), allowing it to deploy in the right way to cushion the passenger. It must be able to withstand a degree of impact without breaking, and it must be durable enough not to pit prematurely in climates where sand is used for winter driving grip.

The windscreen should be regarded as a safety feature that is as important as any other. However, more than simply the right parts are necessary to maintain safety integrity. The right tools, methods and training are required to ensure a safe, reliable and secure installation. Only factory installation methods using genuine Volvo windscreens and adhesives can offer this assurance.



## Volvo Specified Adhesives and Installation Methods are Crucial

The installation process for windscreen replacement has to be very thorough and carried out with Volvo specified adhesive in order to retain the designed properties of the car. Only a Volvo windscreen, installed with Volvo PUR adhesive, heated to the correct temperature, guarantees that the safety properties of the car remain without compromise and that no water leakage can occur.

Using Volvo-specified adhesives will bond the windscreen with the same strength as when assembled in the factory, while also providing a minimal curing time. The strength of that bond is crucial for both a) the function of the passenger airbag, and b) the overall rigidity of the body structure. This is critical for the safety of the passengers and must not be ignored.

**Test after test has revealed that many aftermarket windscreens and adhesives do not have the strength to maintain the bond of the windscreen to the frame during passenger airbag deployment.**

## The Right Parts without Compromise

There are many aftermarket and generic windscreens available today. For reasons of economy, generic solutions are developed by the aftermarket which 'fit' multiple car lines. Genuine Volvo windscreens are specific to your model and they do not compromise fitment. This ensures that the safety systems that are dependent on the windscreen continue to function as designed. Newly designed safety systems must 'look' through the glass, and each model has been fine tuned to see precisely. Only the right windscreen ensures that these safety systems remain calibrated to perform optimally, and that they function as designed.

Genuine Volvo windscreens are tested for numerous requirements including mechanical strength, form, light transmission, optical distortion, secondary image, color identification and resistance to temperature changes. Volvo considers these specifications to be basic and goes much further in certain areas in order to support some of our advanced safety features.

## Volvo's Autonomous Safety Systems Rely on the Windscreen

The windscreen is a part of the function of more than 12 safety systems depending on how your Volvo is equipped. Some of them are extremely sensitive to optical tolerances, glass thickness and mass. For example, the software for City

Safety is fine-tuned for each variant of windscreen and needs extremely tight optical tolerances to function as intended. There is a risk that it will not function properly with any other windscreen, and this has been demonstrated in testing.

When replacing the windscreen, it is of course just as important that all features function as intended and expected. At a Volvo certified repair facility, all required operations are known and carried out using the necessary systems assuring that everything is put back in working order. For example, it is necessary to calibrate the Forward Sensing Module in order to secure the functionality of Collision Warning with Full Auto Brake and Pedestrian Detection, when a windscreen has been replaced. Only a Volvo certified technician, using Volvo's computer diagnostic system, should perform this critical work.

### Safety Systems which rely on the Windscreen for Optimal Performance

- Structural body support
- Prepared seatbelts and airbags (with Collision warning with Brake Support)
- Passenger airbag force distribution
- City Safety auto braking
- Adaptive cruise control (ACC)
- Collision warning with brake support (CWBS)
- Driver alert system (DA)
- Lane departure warning (LDW)
- Lane keeping aid (LKA)
- Road sign information (RSA)
- Ready alert brakes (RAB)
- Pedestrian/ Cyclist Detection
- Active high beam (AHB)

### A Severe Test of Volvo PUR Adhesive

No discussion on the importance of windscreens would be complete unless we also tested the Volvo PUR windscreen adhesive. When the wrong kind of adhesive or inappropriate installation methods are used, the bond with the frame of the car may also be too weak to withstand the power of the passenger airbag, thereby jeopardizing the safety of the passenger.

Volvo PUR adhesive must be heated before installation. Only a Volvo certified repair center has the correct tools to heat and apply the correct quantity of Volvo PUR adhesive.

To demonstrate the strength of a joint glued with Volvo PUR adhesive, we lifted a Volvo S60 by the windscreen. The glue was able to carry the weight of the car, demonstrating the superior strength of Volvo PUR adhesive and windscreens.

### Real World Proof- Volvo Genuine Parts Make a Difference

We tested a few known aftermarket adhesives whose manufacturer claimed that the glue would dry in one hour, and provide an appropriate bond. We were curious to see if the adhesive could withstand the power of a deploying passenger airbag- a normal function for passenger airbags. They failed, blowing the windshield out of the frame.

Volvo Cars' technical support received a question from a Volvo workshop whose customer had problems with City Safety engaging unexpectedly at low speeds. It turned out that the windscreen had been replaced with an aftermarket product prior to the first occurrence of City Safety engaging unexpectedly. After replacement with a Volvo Genuine windscreen, the system was functioning correctly again.



### Notes for your Windscreen replacement



**Please Note:** Some of the information contained in this brochure is subject to change and product specifications may have been altered since printing. Always consult your Volvo retailer for the most recent information. The manufacturer reserves the right to make changes without notice to product, pricing and availability.