

# BETASEAL

## GLASS BONDING SYSTEMS

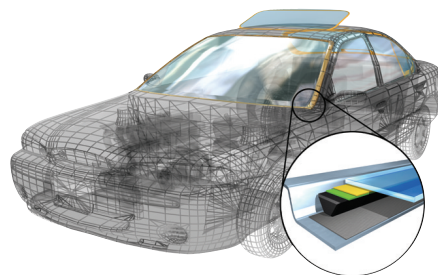


### **BETASEAL Glass Bonding Systems Save Costs/Assembly Time and Improve Vehicle Structure**

Dow Automotive is the only global supplier to combine an extensive plastics offering with bonding and sealing technologies. Our material science and characterization expertise, combined with design engineering, processing knowledge and program management, enable us to provide OEM and tier customers with solutions for specialized applications.

BETASEAL\* glass bonding systems are used worldwide for structural bonding and sealing of stationary glass in passenger vehicles, trucks, buses, rail coaches and off-road vehicles. The superior performance of these systems helps vehicles meet globally mandated safety requirements for barrier and roof crush regulations. Applied robotically or manually from standard or custom pumping equipment, BETASEAL adhesives and primers come in these formulations:

- ▶ QUICK FIX, or fixture-free
- ▶ High viscosity
- ▶ Primerless to paint
- ▶ Low conductive
- ▶ Non-conductive
- ▶ High modulus
- ▶ Uni-wipe
- ▶ Accelerated cure
- ▶ Glass and body cleaners
- ▶ Glass, plastic and body flange primers

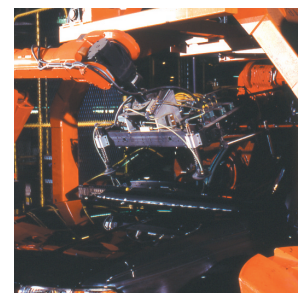


#### *Applications*

Windshields  
Backlites  
Quarter glass  
Modular roof assemblies  
Sunroof assemblies  
Glass hardware  
Door glass

#### *Product advantages and ROI*

- ▶ Provide excellent performance on glass and ceramic substrates
- ▶ Formulations provide a wide range of mechanical properties to suit all vehicle requirements
- ▶ Formulations are developed to be compatible with all vehicle production processes, including cold- and warm-applied systems
- ▶ High performance to the toughest OEM durability specifications

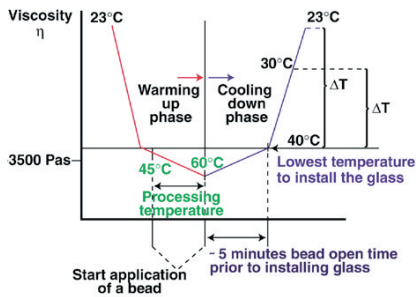


*BETASEAL is used worldwide for structural bonding and stationary glass sealing in all types of passenger and commercial vehicles.*

# BETASEAL

## GLASS BONDING SYSTEMS

*QUICK FIX performance chart*



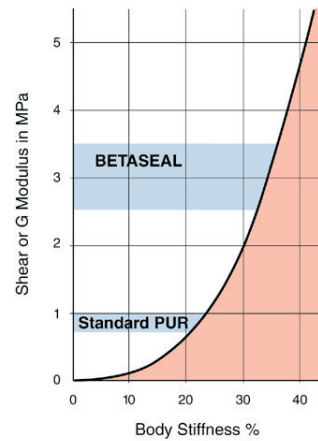
*QUICK FIX adhesives are developed with faster production rates in mind – for better assembly efficiencies at the OEM.*

*Proof of performance*

Dow Automotive's technical expertise in direct glazing allowed one OEM customer to save \$20 per vehicle by incorporating our primerless-to-paint adhesive technology into a new window design.

- ▶ Eliminate flange primer
- ▶ Remove encapsulations
- ▶ Eliminate butyl and bolts
- ▶ Improve quality
- ▶ Improve vehicle stiffness

*Adhesives Modulus Chart*



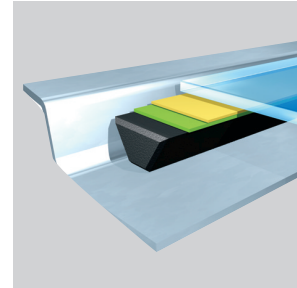
*High modulus adhesives are stiffer than "standard modulus" adhesives, making the car body more rigid, and reducing noise, squeaks and rattles.*

*Full-service support from a single-source supplier*

In addition to the largest selection of material solutions, Dow Automotive offers the following services to meet your bonding needs.

- ▶ Application development, testing and engineering support
- ▶ Plant services support – on line or at your facilities
- ▶ Vertical integration by manufacturing most of our own raw materials to guarantee security of supply and low cost for our customers

Contact your customer service representative, or visit [dowautomotive.com](http://dowautomotive.com) for more information. For technical information select "Downloads" on home page and "Technical Data Sheets" on the next page.



*Primerless-to-paint adhesives:*

- ▶ Eliminate body primer
- ▶ Reduce VOCs
- ▶ Simplify glass bonding process
- ▶ Reduce production costs
- ▶ Decrease cycle time
- ▶ Decrease warranty claims

*We listen. We deliver.*



**Dow Automotive**

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