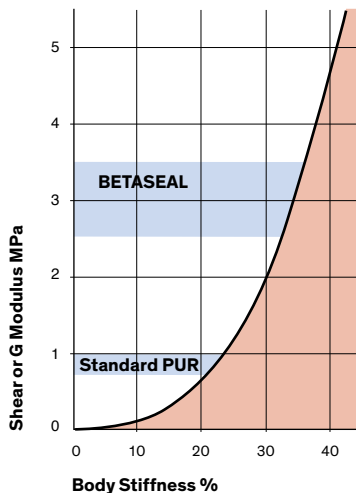




Solutions from Dow Automotive Systems

BETASEAL™ Adhesives Improve Vehicle Structure in Glass Bonding Applications

With a proven track record of providing exceptional performance, lowering costs and reducing assembly times, BETASEAL™ adhesives are used worldwide for the structural bonding and sealing of stationary vehicle glass, including panoramic roofs and liftgates, windshields, backlites, quarter glass, headliner bonding and more.

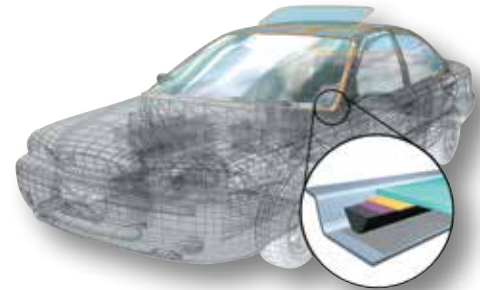


High modulus adhesives are stiffer than "standard modulus" adhesives, making the car body more rigid, and reducing noise, squeaks and rattles.

BETASEAL systems consist of BETAPRIME™ and BETASEAL primers, and BETASEAL urethane adhesives to provide a total solution for glass bonding applications. Innovative formulations provide a wide range of mechanical properties to suit all manufacturer requirements and are compatible with all vehicle production processes, including cold- and warm-applied systems. A wide variety of BETASEAL adhesives also are customized for after-market glass replacement.

BETASEAL™ adhesives 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, rollover 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
- Long open time primer
- High viscosity
- Primerless to paint
- Low conductive
- Non-conductive
- High modulus
- Uni-wipe
- Accelerated cure
- Glass and body cleaner
- Glass, plastic and body flange primers
- Long open time primer
- Surface activators



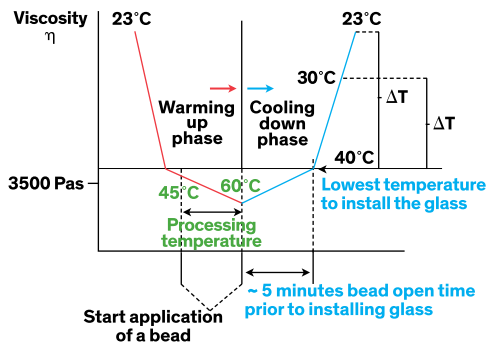
Applications

- Windscreens
- Backlites
- Quarter glass
- Modular roof assemblies
- Sunroof assemblies
- Glass hardware
- Door glass
- Mixed-material bonding

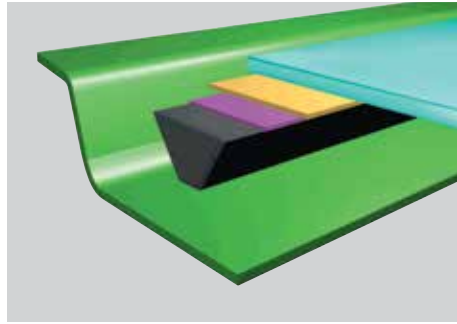
Product advantages and ROI

- 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

QUICK FIX Performance Chart



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



Primerless-to-paint adhesives:

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

ABOUT DOW AUTOMOTIVE SYSTEMS

Dow Automotive Systems, a business unit of The Dow Chemical Company, is a leading global provider of collaborative solutions and advanced materials for automotive and commercial transportation original equipment manufacturers, tier suppliers and aftermarket customers. Our materials focus includes structural, elastic and rubber-to-substrate adhesive solutions; polyurethane foams and acoustical management solutions; innovative composite solutions; and films and fluids, with an emphasis on achieving customer and corporate sustainability goals. Offices and application development centers are located around the world to ensure regionalized technical, engineering and commercial support for customers and industry groups. For additional information, visit dowautomotive.com.

Dow Automotive Systems

The Dow Chemical Company
1250 Harmon Road
Auburn Hills, Michigan 48362
USA
E-mail: dowautomotive@dow.com

US

Toll Free 800 441 4369

International

Latin America	+ 55 11 5184 8722
Europe	+ 800 3 694 63 67 + 31 115 67 2626
Italy	+ 800 783 825
Pacific	+ 800 7776 7776 + 60 3 7965 5392
China	+ 400 889 0789 + 86 21 3851 4988

dow.com

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