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TS Data Sheet 08690
08689
08566

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3M (TM) Fast Cure Auto Glass Urethane (High Viscosity)

Data Sheet

3M Part No.(s)	3M Part Descriptor(s)
08690	310 ml (10.5 fl/oz) Cartridge
08689	450 ml (15.2 fl/oz) Flexible Package
08566	600 ml (20.3 fl/oz) Flexible Package

3M Fax on Demand Identification Number:

Description

3M™ Fast Cure Auto Glass Urethane (High Viscosity) is a one-part moisture curing urethane providing rapid strength build-up. 3M™ Fast Cure Auto Glass Urethane (High Viscosity) is a high strength adhesive designed for use in full cut-out installations without damming materials. 3M™ Fast Cure Auto Glass Urethane (High Viscosity) is designed for the reinstallation of vehicle windshields, backlites and sidelites in the AGR Market, and when fully cured meets the OEM strength requirements.

Features, Advantages, Benefits

Features

- Rapid Strength Buildup
- Passed FMVSS212 @ 4 hr.
@ 72F/ 55% RH, dual airbags
- When Fully cured, meets OEM strength requirements.
- Carlite by Visteon™ Approved

Advantages

- High Viscosity
- Job size flexible packages
- 10 - 15 minute Work Time.
- Easy Gunning
- Officially Licensed by NASCAR™
- Windshield supporting

Benefits

Typical Physical Properties

Container	310 ml (10.5 fl/oz) Cartridge	450 ml (15.2 fl/oz) 600 ml (20.3 fl/oz) Flex Pack
Base	Poyurethane	
Density lbs/Gallon (Appx.)	1.2	
Color	Black	
Solids Content (Appx.)	>99%	
Consistency	Heavy Paste	
Weight Per Gallon	9.8 - 10.0	
Shelf Life	12 months-Store @ 40°F - 80°F	
Work Time	10-15 Minutes (75°F/50% R.H.)	

Product Uses

3M Fast Cure Auto Glass Urethane (High Viscosity) is designed for the reinstallation of vehicle windshields, backlites and sidelites and when fully cured meets the OEM strength requirements.

Performance Properties

Tensile:	1000 PSI
Elongation:	700 %
Hardness (Shore A):	55 – 60
Overlap Shear Strength: (SAE J1529)	
(50% RH, 75°F)	55 PSI
2 Hours	100 PSI
3 Hours	150 PSI
5 Hours	200 PSI
7 Hours	300 PSI
10 Hours	500 PSI
24 Hours	>500 PSI
48 Hours	

Cure Time Charts

Cure Time for one-component adhesives depends on temperature and relative humidity. The following tables illustrate the conditions at which the adhesive listed meets specific overlap shear strengths. At temperatures below 40°F, use 3M Rapid Two Part Autoglass Urethane (RTP)**.

Listed below are approximate times to achieve stated overlap shear strengths. Overlap shear strength to meet OEM requirements varies depending on the make of the car.

	Below 40°F**	40°F	50°F	60°F	70°F	80°F	90°F
Time (hr)							
100 psi							
>80% RH	Use RTP	21	8.5	4	2.5	1	1
75% RH	Use RTP	24	10	5	3.0	1.5	1.5
50% RH	Use RTP	47	16.5	9	5	2.5	1.5

Time (hr) 150 psi	Below 40°F**	40°F	50°F	60°F	70°F	80°F	90°F
>80% RH	Use RTP	40	13	6.5	3	1.5	1
75% RH	Use RTP	43	14.5	7.5	4	2	1.5
50% RH	Use RTP	72	26	13	7	3.5	2.5

Time (hr) 250 psi	Below 40°F**	40°F	50°F	60°F	70°F	80°F	90°F
>80% RH	Use RTP	75	22	10	5.5	2.5	2
75% RH	Use RTP	77	24	12	6.5	3	2.5
50% RH	Use RTP	120	47	21.5	11	5.5	4

** Follow 3M RTP Cold Weather procedure

Handling and Application Information

Directions for Use

The following instructions cover replacement procedure for urethane bonded automotive windshields using the full cut out procedure without the use of a dam material. High viscosity urethane products provide windshield support while the cure is attained to provide structural strength.

1. Remove windshield wiper arms and trim necessary to expose the entire perimeter of glass.
2. Clean dirt and debris from around the pinchweld area before cutting out the glass and again after the glass is cut out to minimize contamination.
3. Cut into existing urethane around entire perimeter of glass with a utility knife cutting as close to edge of the glass as possible.
4. Cut out glass with appropriate removal tools keeping as close to the glass as possible. Remove the glass and repeat Step 2.
5. Dry set the glass. Align for uniform fit and adjust setting blocks as needed for best fit. To allow for sufficient bonding of urethane, make sure there is a MINIMUM of 1/4 inch of glass, in addition to the space that will be taken up by any dam material, around the entire perimeter of the glass. Mark location by applying masking tape to windshield and car body. Slit tape at edge of glass. Remove windshield.
6. Remove major portion of old urethane adhesive from the pinchweld. Use a razor blade knife or utility knife to prevent scraping the paint off the pinchweld and exposing bare metal. **NOTE:** On urethane installations, it is recommended that a thin film of the old urethane be left on the pinchweld and fresh urethane bonded to remaining film. When removing butyl tape or unknown material, remove all old material from pinchweld before applying fresh urethane.
7. Prime any bare metal scratches with 3M Black Urethane Primer, (P/N 08684, 08686). **NOTE:** When

excessive abrasive cleaning is required, prime pinchweld metal with an OEM recommended automotive paint primer and allow to cure properly. Apply 3M Black Urethane Primer to repaired area and allow to dry for 5-10 minutes.

8. Clean inside surface of glass with 3M Glass Cleaner, P/N 08888 taking care to clean surface where the urethane bond will be made.
9. Apply a thin film of 3M Primer/Degreaser, (P/N 08683, 08685, or 08691) to match the OEM bond line area of the glass with a clean wipe. Wipe off excess primer while still wet. Allow to dry for approximately 5 minutes.
10. Apply 3M Black Urethane Primer (P/N 08684, 08686, or 08692) over the primed bond area of the glass. Allow primer to dry for 5-10 minutes.
11. If a foam dam was used in the OEM application it is suggested that foam dam material be replaced with 3M Single Sided Foam Dam Tape.
12. Cut tip to desired shape and size to provide a bead height sufficient to give good contact with the windshield around the entire perimeter. A triangular shaped notch will provide the desired bead shape and height. A height of 1/2 to 9/16 inch and a 1/4 - 5/16 inch base is suggested. **NOTE:** When installing encapsulated glass, apply a bead high enough to assure glass contact before encapsulation contacts the car body and prevents further setting. Back padding material after setting will not be possible.
13. Apply 3M Fast Cure Auto Glass Urethane Windshield Adhesive (High Viscosity) - directly onto the remaining OEM urethane film, behind and contacting the dam material.
14. Position the glass by aligning the masking tape on the glass and car body. Press glass in place to assure complete contact with dam material and urethane adhesive.
15. Paddle squeeze out around edge of glass if possible.
16. Remove masking tape alignment strips.
17. Replace moldings, windshield wipers and other trim removed in Step 1.
18. Clean any excess urethane with adhesive cleaner.

Applications

3M™ Fast Cure Auto Glass Urethane (High Viscosity) can be used for the installation of windshields, backlites and sidelites using the full cutout installation method. 3M™ Applicator Guns, P/N 08993 (Cartridge), and P/N 08991 (Flex Pack) are 18:1 ratio caulk guns. PN08394 3M™ Battery Operated Caulking Gun can be used for easier caulking of the flexible packages.

Storage and Handling

Store between 40°F - 80°F. Rotate stock on a "first-in - first-out" basis. When stored at the recommended conditions in original, unopened containers, this product has a shelf life of 12 months.

Precautionary Information

Refer to Product Label and Material Safety Data Sheet for Health and Safety Information before using this product.

Country

US

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* If 'Directions for Use' reference P.N.'s 8984, 8986, or 8987, please read below.

Federal and local air quality regulations may regulate or prohibit the use of surface preparation and cleanup solvents based on VOC content. Consult your local and Federal air quality regulations for information. When using solvents, use in a well ventilated area. Extinguish all sources of ignition in the work area and observe precautionary measures for handling these materials. Refer to product label and MSDS for P.N. 8984, 8986, or 8987 for detailed precautionary information.

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For Additional Health and Safety Information

See Material Safety Data Sheet (Fax on Demand 1-800-305-0419), or call: **3M Automotive Aftermarket Division** 3M Center, Building 223-6N-01
Phone: 877-MMM-CARS (877-666-2277)

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