

3M Automotive Aftermarket Division



# When Impact Resistance Matters

3M™ Impact Resistant Structural Adhesive



# 3M™ Impact Resistant Structural Adhesive

07333 / 57333



## Designed specifically to meet OEM requirements where impact strength matters most

The all new 3M™ Impact Resistant Structural Adhesive is a two-part epoxy adhesive which provides an extended work time, but can be rapidly cured with heat. 3M Impact Resistant Structural Adhesive has excellent adhesion to a wide variety of properly prepared automotive substrates including steel and aluminum. **This adhesive is intended for true structural bonding applications when specified by automotive OEMs, and is recommended for all weld-bonded and rivet-bonded joints when specified by an OEM.** The 3M Impact Resistant Structural Adhesive also has a unique feature indicating when the curing process has begun through colour change technology.



Cure indicated by silver to purple colour change (30 min at 80°C)



- Higher impact strength versus traditional bonding adhesives
- Adheres to all properly prepared steel and aluminum substrates
- Can be weld-bonded or rivet-bonded immediately after application
- Excellent extreme temperature performance
- Can be cured with heat (30 min at 80°C)
- Dispenses silver, cures purple to indicate proper mixing and curing
- Corrosion inhibiting formula with lifetime corrosion protection

## Optimized for Shear, Peel and Impact Performance

This New 3M™ Impact Resistant Structural Adhesive is optimized to duplicate collision energy management pathways and energy absorption.



Applies easily to properly prepared substrates

### Technical Data

The values shown below are for ambient air temperature and substrate temperature at 70°F.

Work Time	Fixture Time	Cure Time
60 min	8 hrs	24 hrs

#### LAP Shear Strength (ISO 4587)<sup>1</sup>

Environment	Description	3M™ Impact Resistant Structural Adhesive
Room Temp. Cure	24 hours at 23°C	20 MPa
Cold Exposure (C)	RT Cure / 4 hours at -40°C (Tested Cold)	25 MPa
Hot Exposure (H)	RT Cure / 14 days at 80°C (Tested Hot)	10 MPa
Hot Exposure (RT)	RT Cure / 14 days at 80°C (Tested after 24h RT)	21 MPa
Humidity Exposure	RT Cure / 240 hours at 38°C & 95% RH (Tested after 24h RT)	20 MPa
Neutral Salt Spray	RT Cure / 480 hours NSS exposure (Tested after 24h RT)	18 MPa
Corrosion Cycle	RT Cure / Cyclic Corrosion Exposure (Tested after 24h RT)	20 MPa
Water Soak (W)	RT Cure / 168 hours water storage at 55°C (Tested Wet)	19 MPa
Water Soak (D)	RT Cure / 168 hours water storage at 55°C (Tested after 24h RT)	19 MPa

#### T-Peel Strength (ASTM D1876)<sup>2</sup>

Environment	Description	3M™ Impact Resistant Structural Adhesive
Room Temp. Cure	24 hours at 23°C	8.6 N/mm
Corrosion Cycle	RT Cure / Cyclic Corrosion Exposure (Tested after 24h RT)	7.6 N/mm

#### Wedge Impact Peel (ISO 11343)<sup>3</sup>

Environment	Description	3M™ Impact Resistant Structural Adhesive
Room Temp. Cure	24 hours at 23°C	9.6 (J)
Hot Exposure	RT Cure / 4 hours at 80°C (Tested Hot)	6.5 (J)
Cold Exposure	RT Cure / 4 hours at -20°C (Tested Cold)	6.1 (J)

NOTE: The above technical information and data, while representative of current performance, should not be used for specification release.

<sup>1</sup> CRS 1018, 0.85 mm; Adhesive thickness 0.25 mm; Bonded area 12.7 mm x 25.4 mm

<sup>2</sup> CRS 1018, 0.85 mm; Adhesive thickness 0.25 mm; Bonded area 75 mm x 25.4 mm

<sup>3</sup> E60 EZG 60G, 0.78 mm; Adhesive thickness 0.25 mm; Bonded area 30 mm x 20 mm



Can be rivet-bonded or weld-bonded immediately after application



Adhesive bead starts silver in colour and changes to purple once curing is underway

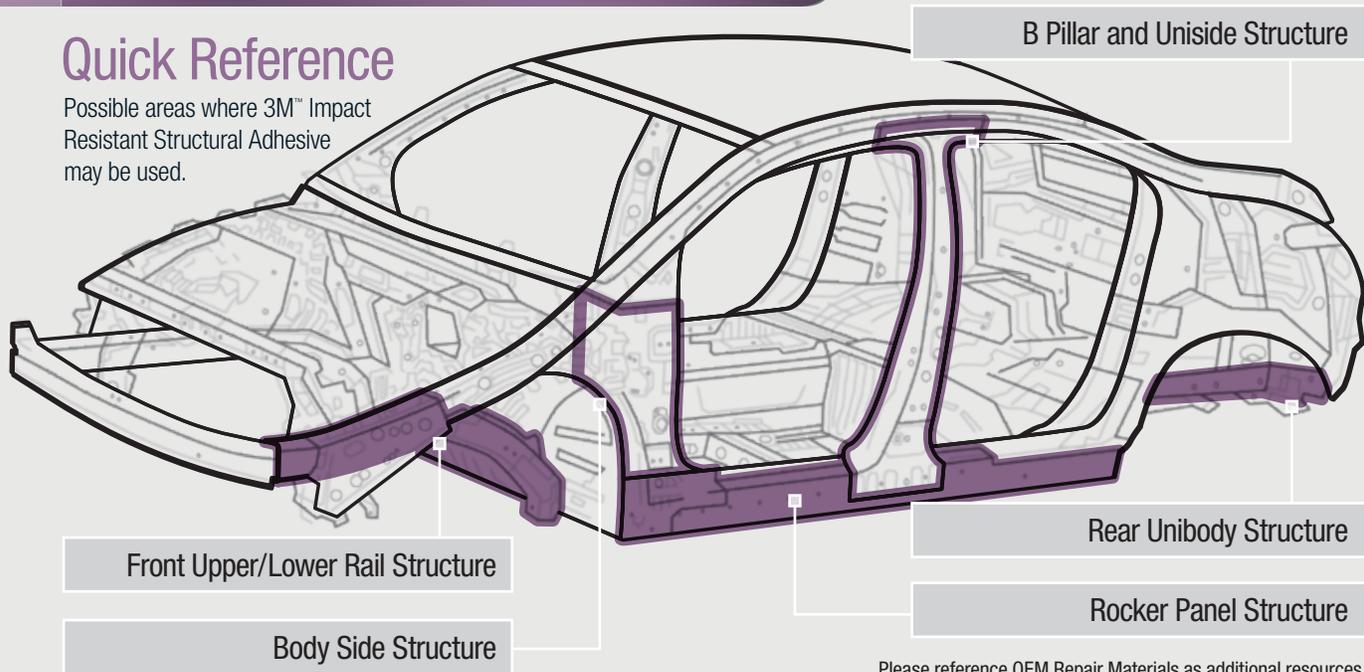


Cured product is purple to indicate proper mixing and complete cure

Please reference OEM Repair Materials as additional resources.

## Quick Reference

Possible areas where 3M™ Impact Resistant Structural Adhesive may be used.



Please reference OEM Repair Materials as additional resources.

## Ordering Information

3M™ Impact Resistant Structural Adhesive			
Part No.	Size	Product	Case Qty.
07333	200 mL	3M™ Impact Resistant Structural Adhesive	3/CS
57333	450 mL DMS	3M™ Impact Resistant Structural Adhesive	2/CS

Accessories		
Part No.	Size	Features/Applications
08193	N/A	3M™ Static Mixing Nozzle 3/8 in nozzle for all 200 mL and 400 mL products
08194	N/A	3M™ Static Mixing Nozzle — Bulk pack (50) 3/8 in nozzle for all 200 mL and 400 mL products;
09930	200 mL	3M™ Performance Pneumatic Applicator Pneumatic — For 200 mL product
08117	200 mL	3M™ Performance Manual Applicator Manual — For 200 mL product
08571	200 mL	3M™ Standard Manual Applicator Economy Line Applicator with heavy duty construction
55847	2:1, 1:1	3M™ Dynamic Mixing Nozzles DMS nozzle for adhesives, sealers and plastic repair products
58207	50:1, 2:1, 1:1	3M™ Dynamic Mixing Nozzle Extension Use with DMS nozzles to provide a thinner bead and to get into hard to reach areas
05846	All DMS Products	3M™ Dynamic Mixing Applicator Pneumatic — Professional applicator to dispense DMS products



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