



# Technical Data Sheet

3M™ Scotch-Weld™ Urethane Adhesive 3549 B/A



[Product Details](#)



[Regulatory Info/SDS](#)

## Product Description

- 3M™ Scotch-Weld™ Urethane Adhesives 3535 B/A is a two-component, polyurethane adhesives which cure at room temperature or with heat to form tough, impact-resistant structural bonds. Their adhesion properties are identical and they vary only in work life, cure time and color. They provide excellent adhesion to many primed or painted metal and plastic substrates and are designed to develop sag resistance approximately 30 seconds after mixing.
- 3M™ Scotch-Weld™ Structural Adhesive Primer EC-3901 is suggested for use on metal surfaces to achieve maximum resistance to water, humidity and salt spray. (See Primer Information in Directions for Use section)

## Technical Information Note

The following technical information and data should be considered representative or typical only and should not be used for specification purposes.

## Typical Uncured Physical Properties

Attribute Name	Value
Color	Brown <sup>1</sup>
Mix Ratio by Volume (B:A)	100:100
Mix Ratio by Weight (B:A)	100:109

<sup>1</sup> Colors may vary from nearly white to yellow/amber. Adhesive performance is not affected by color variation.

Attribute Name	Temperature	Value
Base Color		Off-White
Accelerator Color		Brown
Base Resin		Polyol
Accelerator Resin		Isocyanate
Base Density		1.23
Accelerator Density		1.34
Base Viscosity	23 °C (73 °F)	10,000-40,000 cP <sup>1</sup>
Accelerator Viscosity	23 °C (73 °F)	15,000-40,000 cP <sup>2</sup>

<sup>1</sup> Brookfield RVF #6 sp. @ 10 rpm

<sup>2</sup> Brookfield RVF #5 sp. @ 10 rpm

## Typical Mixed Physical Properties

Temperature: 23 °C (73 °F)

Attribute Name	Value
Worklife, 100g mixed	45 — 70 min
Time to Full Cure	7 d

## Typical Physical Properties

Attribute Name	Value
Cured Color	Brown

## Typical Cured Characteristics

Environmental Condition: 60 min @ 121 °C (250 °F), 30 min at 141 °C (285 °F)

Attribute Name	Test Method	Value
Elongation	ASTM D738	96 % <sup>1</sup>

<sup>1</sup> tested at 2 inches/min.

## Typical Performance Characteristics

### Overlap Shear Strength

Surface Prep: Solvent Wipe

Temperature: 23 °C (73 °F)

Dwell Time: 7 d

Test Method: ASTM D1002, ISO 4587

Substrate	Value
Aluminum	6.89 MPa (1000 lb/in <sup>2</sup> ) <sup>1</sup>
Steel	4.83 MPa (700 lb/in <sup>2</sup> ) <sup>1</sup>

<sup>1</sup> 25 mm (1") wide, 12.7 mm (1/2") overlap samples, 25 mm (1") x 102 mm (4") substrates, bondline thickness: 0.13-0.20 mm (5-8 mil)

Separation rate 2.5 mm/min (0.1 in/min) metal, 51 mm/min (2 in/min) plastic, 510 mm/min (20 in/min) rubber.

Substrate thickness: steel 1.5 mm (60 mil), other metal 1.3-1.6 mm (50-64 mil), rubber and plastic 3.2 mm (125 mil)

Cohesive Failure (CF), Adhesive Failure (AF), Mixed Failure (MF), Substrate Failure (SF)

Temperature: 121 °C (250 °F)

Test Condition: 23 °C

Dwell Time: 60 min

Environmental Condition: +30 min @ 141 °C (285 °F)

Attribute Name	Test Method	Value
Tensile Strength at Break	ASTM D738	20.700000000000003 MPa (3000 lb/in <sup>2</sup> ) <sup>1</sup>

<sup>1</sup> tested at 2 inches/min.

## Handling/Application Information

### Directions for Use

1. Surfaces to be bonded must be dry and free from rust, oil, grease and wax. Surfaces can be cleaned with an abrasive such as 3MTM Coated Abrasives (240 grit) followed by wiping with a solvent such as Scotch-Grip™ Solvent No. 3.\*

2. Primer Information:

3M™ Scotch-Weld™ Structural Adhesive Primer EC-3901 may be applied by spray or brush. Air dry cycles for periods as short as 1/2 hour have been used successfully with the force dry cycle. Humidity contributes greatly to satisfactory use of this primer. Relative humidity of 25% or lower may cause difficulties and should be thoroughly evaluated in the customers' application. The primed surface, after cooling to ambient temperatures, is ready for adhesive bonding. The primed surface should be protected from contamination introduced by dust, fingerprints, oil, etc.

See Data Sheet for Scotch-Weld Structural Adhesive Primer EC-3901 for directions for use.

\*Note: When using solvents, extinguish all ignition sources and follow the manufacturer's precautions and directions for use when handling such materials.

## **Application Equipment**

These products may be applied with spatula, trowel, or flow equipment. Appropriate two-part metering and mixing equipment is also commercially available.

## **Storage and Shelf Life**

Store under normal conditions of 16° to 27°C (60° to 80°F) and 40 to 60% relative humidity in the original, unopened packaging, out of direct sunlight. Lower temperatures cause increased viscosity of a temporary nature. For best performance, use this product within 18 months from date of manufacture.

## **Precautionary Information**

Refer to Product Label and Material Safety Data Sheet for health and safety information before using this product. For additional health and safety information, call 1-800-364-3577

## **Automotive Disclaimer**

### **Select Automotive Applications:**

This product is an industrial product and has not been designed or tested for use in certain automotive applications, such as automotive electric powertrain battery or high voltage applications, which may require the product to be manufactured in a IATF certified facility, meet a Ppk of 1.33 for all properties, undergo an automotive production part approval process (PPAP), or fully adhere to automotive design or quality system requirements (e.g., IATF 16949 or VDA 6.3). Customer assumes all responsibility and risk if customer chooses to use this product in these applications.

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## **ISO Statement**

This product was manufactured under a 3M quality system registered to ISO 9001 standards.

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