Scotch-Weld™

TE-200 Thermoset Adhesive

Product Data Sheet

Updated : June 2005
Supersedes : November 1997

Product Description

3M Scotch-Weld™ TE-200 Adhesive is a one-component, moisture curing, urethane adhesive that is applied warm.

This low viscosity adhesive has a long open time and is ideal for bonding wood. Yields thin glue lines.

- 100% solids
- Long open time
- Bonds selected plastics
- One component
- Low viscosity
- Very high strength bonds to wood
- Rapid rate of strength build-up

Physical Properties (Uncured)
Not for specification purposes

Application Temperature	250 °F 121°C	
Viscosity (at 250°F - 121°C)	3,000 cps (mPa.s)	
Colour (solid)	White/Off-White	
Open Time²	4 minutes	
Set Time³	2 minutes	
Density molten lbs/gallon	8.9	
Shelf Life	6 months from date of despatch by 3M when stored in the original carton at 21°C (70°F) & 50 % Relative Humidity	

¹ Measured on Brookfield viscometer with Thermosel using spindle no. 27.
² The bonding range of a 3.2mm/1/8" bead of molten adhesive on a non-metallic substrate.
³ The minimum amount of time required between when the bond is made and when it will support a 3.6 N/mm² tensile load.

Physical Properties (Cured)
Not for specification purposes

Shore D Hardness¹	60	
Modulus²	67 N/mm² (9,700 psi)	
Tensile Strength at Break²	28 N/mm² (4,000 psi)	
Elongation at Break²	625 %	

¹ Measured on 2.3 - 2.8mm thick bars
² ASTM D 638, Die C, measured on 0.28 - 0.30 mm thick films cured for a minimum of 7 days at 77°F (25°C) / 50% Relative Humidity.

Performance Characteristics

Not for specification purposes

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

Overlap Shear Strength Tested at 73°F (23°C)

Substrate	MPa	psi
Maple	13.45	1,950
FRP	24.14	3,500
Polycarbonate	15.17*	2,200*
Polyacrylic	8.62*	1,250*
Polystyrene	4.48*	650*
ABS	8.62*	1,250*
PVC	14.83*	2,150*
• Substrate Failure		

Overlap Shear Strength Tested at 180°F (82°C)

Substrate	MPa	psi
Maple	4.28	620
FRP	10.69	1550
• Substrate Failure		

180° Peel Strength Tested at 73°F (23°C)

Substrate	N/10mm	piw
FRP	140*	80*
Polycarbonate	158*	90*
Polyacrylic	80*	46*
Polystyrene	16	9
ABS	140*	80*
PVC	140*	80*
Aluminium	NT	NT
Glass	NT	NT
[1] Cotton duck failed during test. NT : Not Tested • Substrate Failure		

Directions for Use

Apply to clean, dry surfaces. Remove oil, grease and other contaminants by wiping with isopropyl alcohol*. For fibre reinforced plastics and other materials that are often contaminated with mold release agents, it is recommended that the surface be solvent wiped, abraded and solvent wiped*. After heating to 250°F (121°C), apply adequate amount of Scotch-Weld™ Adhesive to one of the substrates to be bonded. Join the substrates within the recommended open time and hold/fixture the bonded part until the adhesive has adequately set.

Note: Do not bond metal or glass to itself or each other because cure will not occur due to the low moisture vapour permeation rate of the substrate.

Cure Time:
The cure rate will vary depending on air temperature, relative humidity, substrate type and bond line thickness. Cure rate is more rapid on wood (moisture-rich substrate) than on plastic.

Clean Up:
Allow product to solidify. Remove uncured waxy material (usually within the first 20 minutes after application) by scraping with a putty knife or similar tool. For cured material, remove by cutting or sanding. **Do not use heat or flame to remove adhesive.**

*** Note:** When using solvents, extinguish all ignition sources and observe manufacturers' directions and precautions for handling such materials.

Dispensing Equipment

Cartridge dispensing equipment: 300ml aluminium cartridges of 3M Scotch-Weld™ Adhesive should only be dispensed with the 3M Scotch-Weld™ Adhesive Applicator or the 3M Scotch-Weld™ II Adhesive Applicator. The adhesive should be preheated for 45 minutes in the 3M Scotch-Weld™ Adhesive Preheater or the 3M Scotch-Weld™ II Applicator prior to dispensing.

Bulk dispensing equipment: Bulk containers of adhesive can only be dispensed through equipment specifically designed for use with hot melt polyurethane reactive adhesives (PUR's). All equipment must be used in strict accordance with the recommendations of the equipment manufacturer.

Important: Adhesive heated at application temperature for more than 16 hours should be discarded.

Health and Safety Information

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

Values presented have been determined by standard test methods and are average values not to be used for specification purposes. Our recommendations on the use of our products are based on tests believed to be reliable but we would ask that you conduct your own tests to determine their suitability for your applications. This is because 3M cannot accept any responsibility or liability direct or consequential for loss or damage caused as a result of our recommendations.

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