



Technical Data Sheet

3M™ Scotch-Weld™ Polyurethane Reactive Adhesive TE200

Product Description

3M™ Scotch-Weld™ Polyurethane Reactive Adhesives are a family of one-component, moisture curing, urethane adhesives. These adhesives are applied warm and bond a wide variety of substrates such as wood, fiber reinforced plastic (FRP) and many other plastics to themselves, to metal and to glass.

3M™ Scotch-Weld™ TE200 is an extrudable grade adhesive with fast set time, long open time ideal for bonding wood. Yields thin glue lines.

Product Features

- 100% solids
- High strength bonds
- Rapid rate of strength build-up
- One component
- Broad substrate adhesion
- Various set times
- Highly plasticizer resistant
- Can be used to bond heat sensitive materials

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 Mixed Physical Properties

Property	Values	Additional Information
Open Time	4 min	View

Notes: POR=Pop Off Rubber

Time to Handling Strength	120 s	View
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Notes: Min time between bond creation and ability to support a 5 psi tensile load. Open and set times determined by RT environment. Higher temps will lengthen open and set times, while lower temperatures will shorten open time and set time.

Typical Uncured Physical Properties

Property	Values	Additional Information
Color (solid)	White/Off-White	

Density (molten)	8.9 lb/gal	
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Viscosity	3000 cP	
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View 

Temp C: 121C
Temp F: 250F

Notes: Measured on Brookfield viscometer with Thermosel using spindle #27


Typical Cured Characteristics


Property	Values	Additional Information
Modulus	9700 lb/in ²	View 

Test Method: ASTM D638


Dwell/Cure Time: 7.0
Dwell Time Units: day
Temp C: 23C
Temp F: 72F

Notes: Die C, measured on .011" - .017" thick films

Shore D Hardness	60	View 
<p>Test Method: ASTM D2240</p> <p>Temp C: 23C Temp F: 73F</p>		

Tensile Strength	4000 lb/in ²	View 
<p>Test Method: ASTM D638</p> <p>Test Name: At Break Dwell/Cure Time: 7.0 Dwell Time Units: day Temp C: 23C Temp F: 73F</p> <p>Notes: Die C, measured on .011" - .017" thick films</p>		


Typical Performance Characteristics

Property	Values	Additional Information
Elongation at Break	625 %	View 


Test Method: ASTM D638


Dwell/Cure Time: 7.0
Dwell Time Units: day
Temp C: 23C
Temp F: 72F


Notes: Die C, measured on .011" - .017" thick films


180° Peel Adhesion	80 lb/in width	View 
<p>Dwell/Cure Time: 168.0 Dwell Time Units: hr Temp C: 25C Temp F: 77F Environmental Condition: 50%RH Substrate: Fiber-Reinforced Plastic Failure Mode: Cotton duck failed during testing</p>		


Notes: N/R – Not Recommended. 1in x 8in flexible cotton duck (canvas) bonded to rigid 1in x 4in x 0.125in substrates. Jaw separation 2in/min. Bonds were prepared using the suggested procedure for the particular substrate tested.


180° Peel Adhesion	90 lb/in width	View 
<p>Dwell/Cure Time: 168.0 Dwell Time Units: hr Temp C: 25C Temp F: 77F Environmental Condition: 50%RH Substrate: Polycarbonate (PC)</p> <p>Notes: N/R – Not Recommended. 1in x 8in flexible cotton duck (canvas) bonded to rigid 1in x 4in x 0.125in substrates. Jaw separation 2in/min. Bonds were prepared using the suggested procedure for the particular substrate tested.</p>		

180° Peel Adhesion	46 lb/in width	View 
<p>Dwell/Cure Time: 168.0 Dwell Time Units: hr Temp C: 25C Temp F: 77F Environmental Condition: 50%RH Substrate: Acrylic (PMMA) Failure Mode: Cotton duck failed during testing</p> <p>Notes: N/R – Not Recommended. 1in x 8in flexible cotton duck (canvas) bonded to rigid 1in x 4in x 0.125in substrates. Jaw separation 2in/min. Bonds were prepared using the suggested procedure for the particular substrate tested.</p>		

180° Peel Adhesion	9 lb/in width	View 
<p>Dwell/Cure Time: 168.0 Dwell Time Units: hr Temp C: 25C Temp F: 77F Environmental Condition: 50%RH Substrate: Polystyrene</p> <p>Notes: N/R – Not Recommended. 1in x 8in flexible cotton duck (canvas) bonded to rigid 1in x 4in x 0.125in substrates. Jaw separation 2in/min. Bonds were prepared using the suggested procedure for the particular substrate tested.</p>		


180° Peel Adhesion	80 lb/in width	View 
<p>Dwell/Cure Time: 168.0 Dwell Time Units: hr Temp C: 25C Temp F: 77F Environmental Condition: 50%RH Substrate: ABS Failure Mode: Cotton duck failed during testing</p> <p>Notes: N/R – Not Recommended. 1in x 8in flexible cotton duck (canvas) bonded to rigid 1in x 4in x 0.125in substrates. Jaw separation 2in/min. Bonds were prepared using the suggested procedure for the particular substrate tested.</p>		


180° Peel Adhesion	80 lb/in width	View 
<p>Dwell/Cure Time: 168.0 Dwell Time Units: hr Temp C: 25C Temp F: 77F Environmental Condition: 50%RH Substrate: Polyvinyl chloride (PVC) Failure Mode: Cotton duck failed during testing</p> <p>Notes: N/R – Not Recommended. 1in x 8in flexible cotton duck (canvas) bonded to rigid 1in x 4in x 0.125in substrates. Jaw separation 2in/min. Bonds were prepared using the suggested procedure for the particular substrate tested.</p>		


180° Peel Adhesion	N/R lb/in width	View 
<p>Dwell/Cure Time: 168.0 Dwell Time Units: hr Temp C: 25C</p>		

Temp F: 77F
Environmental Condition: 50%RH
Substrate: Aluminum

Notes: N/R – Not Recommended. 1in x 8in flexible cotton duck (canvas) bonded to rigid 1in x 4in x 0.125in substrates. Jaw separation 2in/min. Bonds were prepared using the suggested procedure for the particular substrate tested.

180° Peel Adhesion	N/R lb/in width	View 
<p>Dwell/Cure Time: 168.0 Dwell Time Units: hr Temp C: 25C Temp F: 77F Environmental Condition: 50%RH Substrate: Glass</p> <p>Notes: N/R – Not Recommended. 1in x 8in flexible cotton duck (canvas) bonded to rigid 1in x 4in x 0.125in substrates. Jaw separation 2in/min. Bonds were prepared using the suggested procedure for the particular substrate tested.</p>		

T-Peel Adhesion	12 lb/in ²	View 
<p>Test Method: ASTM D1876</p> <p>Dwell/Cure Time: 7.0 Dwell Time Units: day Temp C: 23C Temp F: 73F Substrate: Plasticized Vinyl</p> <p>Notes: The separation rate of the testing jaws was 2" per minute. Bonds were prepared using the suggested procedure for the particular substrate tested. AF: adhesive failure CF: cohesive failure SF: substrate failure</p>		

T-Peel Adhesion	31 lb/in ²	View 
<p>Test Method: ASTM D1876</p> <p>Dwell/Cure Time: 7.0 Dwell Time Units: day Temp C: 23C Temp F: 73F Substrate: Plasticized Vinyl Failure Mode: SF</p> <p>Notes: The separation rate of the testing jaws was 2" per minute. Bonds were prepared using the suggested procedure for the particular substrate tested. AF: adhesive failure CF: cohesive failure SF: substrate failure</p>		

Available Sizes

Available Package Sizes:

1/10th gallon cartridge¹ 2 Kilo bag³ 5 gallon pail 55 gallon drum

10 fluid oz/295ml 2 Kgs(4.4 lb) 36 pounds (16.3 kg) 400 pounds (181.4 kg)

Thread size for nozzle M15 X 1.5 Slug OD. – 5.0in (127 mm) Pail ID. – 11.25in (285.8mm) Drum ID. – 23.6in (600.5 mm)

Pail Ht. – 13.5in (343 mm) Drum Ht. – 34.8in (883.9 mm)

¹5 -1/10th gallon cartridges per case.

²10 disposable plastic nozzles are supplied with each case of adhesive.

³6 -2kg bags per case.

Approximate Coverage per container:

(Linear ft per container based on 1/8in dia. Bead size)

1/10th gallon cartridge 2 Kilo bag 5 gallon pail 55 gallon drum

250ft (76.2m) 1650ft (502.9m) 13,500ft (4114.8m) 170,200ft (51876.9m)

Storage and Shelf Life

For maximum shelf life, store product at normal indoor warehouse storage (below 120°F/49°C).

Products in 10 fluid ounce cartridge and 2 kilogram have a 12 month from date of manufacture while all others have a 6 month from date of manufacture shelf life in unopened containers.

Bottom Matter

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Automotive Disclaimer

Automotive Applications: This product is an industrial product and has not been designed or tested for use in certain automotive applications, including, but not limited to, automotive electric powertrain battery or high voltage applications. This product does not fully adhere to typical automotive design or quality system requirements, such as IATF 16949 or VDA 6.3. This product may not be manufactured in an IATF certified facility and may not meet a Ppk of 1.33 for all properties. The product may not undergo an automotive production part approval process (PPAP). Customer is solely responsible for evaluating the product and determining whether it is appropriate and suitable for customer's automotive application and for conducting incoming inspections before use of the product. Failure to do so may result in injury, death, and/or harm to property. No written or verbal statement, report, data or recommendation by 3M related to automotive use of the product shall have any force or effect unless in an agreement signed by the Technical Director of 3M's Automotive Division. Customer assumes all responsibility and risk if customer chooses to use this product in an automotive electric powertrain battery or high voltage application, and 3M will not be liable for any loss or damage arising from or related to the 3M product or customer's use of the product, whether direct, indirect, special, incidental, or consequential (including, but not limited to, lost profits or business opportunity or recall costs), regardless of the legal or equitable theory asserted, including, but not limited to, warranty, contract, negligence, or strict liability. In no event shall 3M be liable for any damages in excess of the purchase price paid for the product.

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Handling/Application Information

Dispensing Equipment

3M™ Scotch-Weld™ Polyurethane Reactive Adhesive Cartridges can only be dispensed through the 3M™ Scotch-Weld™ Polyurethane Reactive Adhesive Applicator. Other container sizes can be dispensed through bulk equipment specifically designed for use with hot melt polyurethane reactive adhesives (P.U.R.). For more information on P.U.R. application equipment, contact your local 3M sales representative. All equipment must be used in strict accordance with the recommendations of the manufacturer.

WARNING: Do not use Scotch-Weld polyurethane reactive adhesive above 275°F (135°C). Scotch-Weld polyurethane reactive adhesive should not be applied to substrates that exceed 275°F (135°C).

Caution: Wear heat resistant gloves and safety glasses when handling.

Container sizes available: 10 fl. oz. cartridge, 2 kilogram foil bag, 1 gallon can, five gallon pail, 55 gallon drum.

Directions for Use

Apply to clean, dry surfaces. Remove oil, grease and other contaminants by wiping with isopropyl alcohol.* For fiber 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.* For additional information, see section on surface preparation. After heating to recommended application temperature, apply adequate amount of 3M™ Scotch-Weld™ Polyurethane Reactive Adhesive to one of the substrates to be bonded. Join the substrates within the adhesives specified open time and hold/fixture the bonded part until the adhesive has adequately set. Do not use to bond metal or glass to itself or each other or cure will not occur due to low moisture vapor transmission of the substrate.

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

*Note: When using solvents, extinguish all ignition sources, including pilot lights, and follow the manufacturer's precautions and directions for use.

Cleanup: 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.

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.

Surface Preparation

Plastic: Wipe with isopropanol soaked cheesecloth.* Allow solvent to evaporate before bonding. Note: 3M™ Scotch-Weld™ Polyurethane Reactive Adhesives are not recommended for bonding untreated polyolefins.

Plastic contaminated with mold release: Wipe with isopropyl alcohol soaked cheesecloth, abrade with fine grit abrasive, wipe with isopropyl alcohol soaked cheesecloth.* Allow solvent to evaporate before bonding.

FRP, Rubber and Aluminum (uncoated):Wipe with methyl ethyl ketone (MEK) soaked cheesecloth, abrade with fine grit abrasive, wipe with MEK soaked cheesecloth.*

Allow solvent to evaporate before bonding. Priming may be necessary on aluminum if part will be subjected to hot/humid conditions.

Glass: Wipe with MEK-soaked cheesecloth.* Allow solvent to evaporate before bonding. Priming may be necessary on glass if subject part will be subjected to hot/humid conditions.

*Note: When using solvents, extinguish all ignition sources, including pilot lights, and follow the manufacturer's precautions and directions for use.

References

Property	Values
3m.com Product Page	https://www.3m.com/3M/en_US/p/d/b40069379/
Safety Data Sheet SDS	https://www.3m.com/3M/en_US/company-us/SDS-search/results/?gsaAction=msdsSRA&msdsLocale=en_US&co=ptn&q=TE200

Family Group

Link Tags:

- TE015
- TE030
- TE100
- TE200

Products	Open Time	Shore D Hardness
TE100	2 min	61
TE030	1 min	60
TE200	4 min	60
TE015	1.5 min	65

ISO Statement

This Industrial Adhesives and Tapes Division product was manufactured under a 3M quality system registered to ISO 9001 standards.

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 or (651) 737-6501.

Information

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