

Technical Data Sheet

3M™ Scotch-Weld™ Polyurethane Reactive (PUR) Easy 250 Wood Adhesive EZ250150

Product Description

3M™ Scotch-Weld™ Polyurethane Reactive (PUR) Easy 250 Plastic Adhesives are 100% solid, warm temperature applied, moisture curing urethanes. These products bond a wide variety of plastics and wood to themselves and to metal and glass.

3M™ Scotch-Weld™ Polyurethane Reactive (PUR) Easy 250 Plastic Adhesive EZ250150 has long open and set time ideal for bonding a wide variety of substrates including wood, plastics and also bonds aluminum glass to plastics and wood.


Product Features

- 100% solids
- Moisture curing urethane
- One component
- Rapid rate of strength build up
- Open time from 2 - 4 minutes
- Set times from 30 - 150 seconds


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 (min)	4 min	View 

Notes: Max time allowed after applying adhesive to a substrate before bond must be closed and fixed. Cure times approximate and depend on adhesive temperature. Hotmelts: The approx. bonding range of a 1/8" bead of molten adhesive on a non-metallic surface.

Time to Handling Strength	150 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)	9.1 lb/gal	
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Viscosity	9000 cP	
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Temp C: 121C
Temp F: 250F

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

Typical Cured Characteristics


Property	Values	Additional Information
Shore D Hardness	45	View 
<p>Test Method: ASTM D2240</p> <p>Temp C: 23C Temp F: 73F</p>		
Tensile Strength	3300 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: 72F</p> <p>Notes: Die C, measured on .011" - .017" thick films</p>		


Typical Performance Characteristics


Property	Values	Additional Information
180° Peel Adhesion	95 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) 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	50 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)</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	55 lb/in width	View 
<p>Dwell/Cure Time: 168.0 Dwell Time Units: hr Temp C: 25C Temp F: 77F Environmental Condition: 50%RH</p>		


Substrate: ABS

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	75 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	50 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: Aluminum</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	60 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>		

Elongation at Break	700 %	View 
<p>Test Method: ASTM D638</p> <p>Dwell/Cure Time: 7.0 Dwell Time Units: day Temp C: 23C Temp F: 72F</p> <p>Notes: Die C, measured on .011" - .017" thick films</p>		

Application Temperature	121 °C
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Application Temperature	250 °F
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Available Sizes

Available Package Sizes:

1/10th gallon cartridge^{1 2} 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 60°F (16°C) to 80°F (27°C), indoors and protected from exposure to moisture.

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

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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Bottom Matter

3M

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Handling/Application Information

Dispensing Equipment

3M™ Scotch-Weld™ Polyurethane Reactive (PUR) Easy 250 Plastic Adhesive Cartridges can only be dispensed through the 3M™ Scotch-Weld™ Polyurethane Reactive Adhesive Applicator or the 3M™ Scotch-Weld™ Polyurethane Reactive (PUR) Easy 250 Adhesive Applicator. Other container sizes can be dispensed through bulk equipment specifically designed for use with hot melt polyurethane reactive adhesives (PUR). For more information on PUR 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 (PUR) easy 250 plastic adhesive above 275°F (135°C) and should not be applied to substrates that exceed 275°F (135°C).

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

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 (PUR) Easy 250 Plastic

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 products 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

All wood should be dry and free of contaminants such as sawdust, dirt or other substances that may interfere with the adhesive bonding process. If the surface to be bonded contains a coating or finish, bonds should be made and evaluated to

ensure proper adhesion. It may be necessary to evaluate other 3M™ Scotch-Weld™ Polyurethane Reactive (PUR) Easy 250 Plastic Adhesive products that are better suited to bond plastic surfaces.

References

Property	Values
3m.com Product Page	https://www.3m.com/3M/en_US/p/d/b40069378/
Safety Data Sheet SDS	https://www.3m.com/3M/en_US/company-us/SDS-search/results/?gsaAction=msdsSRA&msdsLocale=en_US&co=ptn&q=EZ250150

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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