

# 3M™ Scotch-Weld™ Polyurethane Reactive (PUR) Adhesive Systems



## Dual power



Structural adhesive benefits  
with hot melt adhesive speed  
for wood, plastic, and more



# 3M™ Scotch-Weld™ Polyurethane Reactive (PUR) Adhesive Systems



*Choice of viscosities and open time to match application requirements for bonding wood to wood and other substrates.*

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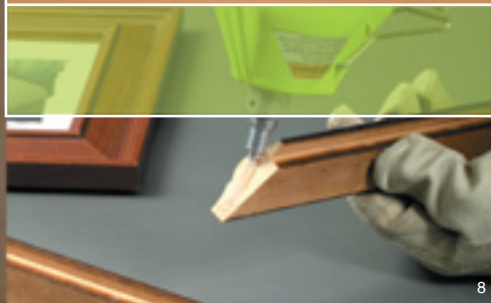


*Bond plastic emblem to glass without fixturing.*

7



9



*Choice of adhesives for bonding hardwood or softwood in miter-cut frames.*

8

Easy to use with disposable nozzle, easy to maintain with no purging

## Production power of dual technologies in single, self-contained systems

The hand-held 3M™ Scotch-Weld™ PUR Easy Adhesive Applicator or PUR Easy 250 Applicator put a powerful production capability in your assembly operation. With either applicator and 3M polyurethane reactive adhesives, you have the practical benefits of two technologies.

### 1 Performance benefits typical of structural adhesive technology

- **Greater than 1,000 lbs. holding strength within minutes** exceeds strength of conventional hot melt and PVA adhesives
- **Save finishing steps** with the elimination of nails and other mechanical fasteners in many applications

### 2 Production benefits typical of hot melt adhesive technology

- **Fast set** and handling strength in as few as 5 seconds help eliminate or minimize fixturing to speed assembly
- **Low VOCs and 100% solids** eliminate drying and ventilation equipment and will not attack plastics
- **Choice of open times and viscosities** depending on the applicator and adhesive
- **One-component and moisture-curing** eliminate metering, mixing, and curing time and equipment

# Versatile

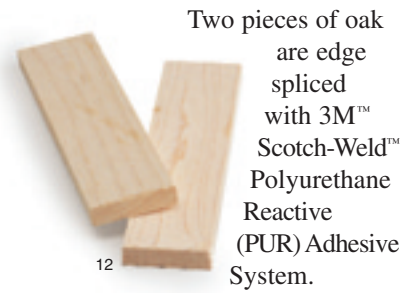


Bond simulated-wood plastic trim to wood cabinet doors with an invisible bond line.

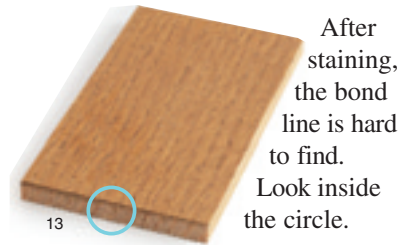
Bond mirrors to wood doors with immediate handling strength to keep assembly moving.

Bond wood components throughout a hot tub enclosure. Durable bond resists temperature differentials, weathering, moisture, and chemicals.

Thin, flexible bond line to improve fit, appearance, and durability



Two pieces of oak are edge spliced with 3M™ Scotch-Weld™ Polyurethane Reactive (PUR) Adhesive System.



After staining, the bond line is hard to find. Look inside the circle.



The wood fails before the bond line in this test and many other applications.

## Trigger a neat adhesive bead at up to 11 lbs/hr for many applications

### Windows and Doors

- Interior and exterior wood and metal household doors
- Wood trim to vinyl sash in windows
- Mirrors to doors
- Kick plates to doors
- Rubber insulation to wood, plastic and metal
- Shade pulls, venetian blinds, and cornices

### Household and Office Furnishings

- Wood or plastic decorative trim and moldings for wood furniture and cabinets
- Wood furniture component assembly

- Edge moldings for countertops, tables, shelving, and desks
- Wood or MDF drawer bottoms, backs, and facings
- Glass stabilization in entertainment center doors
- Cabinet framing and door panel joints
- Speaker felt attachment to spider coils in sound systems
- Fabric and leather in furniture upholstery and trim
- Staircase risers and runners
- Modular office wall partitions

### A few of the many more examples

- Fiberglass to wood in marine interiors
- Metal to laminated honeycomb in trade show booths
- Plastic to plastic in point-of-purchase displays

Lower application temp  
for heat sensitive substrates

Either way...bond fast, h

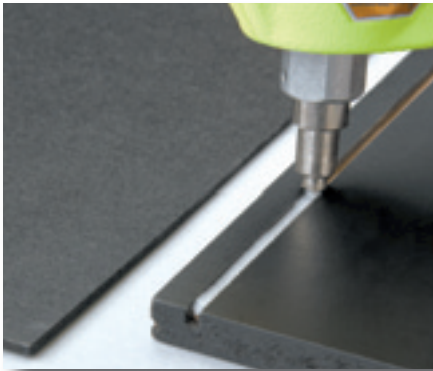
## 3M™ Scotch-Weld™ Polyurethane Reactive (PUR) Easy Adhesive Systems

### System Components

- Electrically-heated pneumatic green applicator dispenses adhesive at 170°F (77°C) with the squeeze of a trigger
  - Easy to use and maintain with disposable nozzle, no tip cap, no grease, and no system purging
  - Adhesive can stay in applicator at dispensing temperature for up to 40 hours
- Four adhesives with a range of properties including adhesion to heat sensitive substrates
- Optional pre-heater to keep cartridges ready to use



15



16 Permanently and quickly bond wood and MDF (Medium Density Fiberboard) bottoms and side panels in drawers.



17 Bond wood or plastic rosettes to wood drawers without fixturing or drying time.

### PUR Easy Adhesive Selection for a Wide Variety of Substrates

**17005:** Very fast set time for many surface combinations. 0.75-minute open time.

**17010:** Very fast set time for small to medium wood or plastic parts. 0.75-minute open time.

**17030:** Medium set time for bonding wood to select plastics. Low viscosity. 1-minute open time.

**17060:** Longer set time for many surface combinations. Lower viscosity. 2.5-minute open time.

For details see pages 6 and 7.



18 Adhesives are available for bonding a variety of wood sizes and configurations such as this mortise and tenon assembly.



19 For both PUR Easy and PUR Easy 250, an optional filter/pressure regulator is available to remove particulate material and water.

### 3M™ Scotch-Weld™ Polyurethane Reactive (PUR) Easy 250 Adhesive Systems



#### System Components

- Electrically-heated pneumatic yellow applicator dispenses adhesive at 250°F (121°C) with the squeeze of a trigger
  - Easy to use and maintain with disposable nozzle, no tip cap, no grease, and no system purging
  - Adhesive can stay in applicator at dispensing temperature for up to 16 hours
- Five adhesives with a range of properties including adhesion in difficult-to-bond jobs such as hardwood miter corners
- Optional dual temperature pre-heater to keep cartridges ready to use

#### PUR Easy 250 Adhesive Selection for a Wide Variety of Substrates Including Many Difficult-to-Bond Applications

**250015:** Fast set time for wood and select plastics. 1-minute open time.

**250060:** Medium set time for wood and select plastics. 2-minute open time. Low viscosity.

**250120:** Medium set time for bonding wood with thin glue lines. Low viscosity. 4-minute open time.

**250030:** Fast set time for many plastics including polystyrene and polyacrylic. 2-minute open time.

**250150:** Medium set time for metal, plastics, glass, and many surface combinations including aluminum or glass to plastics or wood. 4-minute open time.

For details see pages 6 and 7.



*Long open time provides production speed flexibility for bonding a mirror to plywood or MDF panel in a medicine cabinet door.*



*A neatly applied bead of adhesive bonds the extruded plastic edge molding to the particle board core of a counter top.*



*For furniture and upholstery, PUR 250 adhesive bonds leather or fabric gimping and seams.*



*With a thin bond line, PUR 250 adhesive makes a secure, aesthetically-pleasing crown molding assembly.*

# 3M™ Scotch-Weld™ Polyurethane Reactive (PUR) Easy Adhesive Information

Product	Description	Viscosity @ 170°F (77°C) (CPS)	Open Time (Min.)	Set Time (Sec.)	Shore D	Tensile Strength (PSI)	Elongation (%)
17005	• Very fast set time • Excellent wood bonding adhesive • Medium open time	28,600	0.75	5	65	3900	725
17010	• Fast set time • Best for bonding wood and plastics • Small-to-medium parts assembly	14,200	0.75	10	35	1055	750
17030	• Medium set time • Low viscosity • Best for bonding wood to select plastics • Thin glue line	15,700	1	30	60	4000	625
17060	• Long open time • Lower viscosity • Thin glue line	9600	2.5	60	30	1625	400

## Terminology

Open times and set times are based on a room temperature environment. High temperatures will lengthen open times and set times while lower environmental temperatures will shorten open times and set times.

## Shelf Life

12 Months is the maximum amount of time an end-user has to use the product while stored within the conditions recommended by 3M.

Open Time	Set Time
This is the maximum time between the application of the adhesive and when the parts must be joined together. This information is based on 1/8" bead and non-metallic substrates at 75°F (20°C).	Also known as fixturing/clamping time. This is the minimum amount of time required for the adhesive to solidify and hold the parts together (able to support a tensile load of 5 psi).

## Adhesive/Substrate Bonding Guide

Substrates	Wood/hardboard		MDF*		PVC		Polystyrene (beadboard)		Polycarbonate <sup>4</sup>		Melamine		ABS		FRP-epoxy**		Polyacrylic		
	PUR EZ	PUR EZ 250	PUR EZ	PUR EZ 250	PUR EZ	PUR EZ 250	PUR EZ	PUR EZ 250	PUR EZ	PUR EZ 250	PUR EZ	PUR EZ 250	PUR EZ	PUR EZ 250	PUR EZ	PUR EZ 250	PUR EZ	PUR EZ 250	
Wood/hardboard	17005 17030	250015 250060 250120	17005 17010	250015 250060 250120	17010 17030 17060	250015 250030 250150	17005 17010 17030 17060	250015 250030 250060 250120 250150	17010 17030 17060	250030 250150	17010 17030 17060	250015 250030 250150	17005 17010 17030 17060	250015 250030 250150	17030 17060	250030 250060 250150	17005 17010 17030 17060	250030 250150	
MDF*			17005 17010	250015 250060 250120	17010 17030 17060	250015 250030 250150	17005 17010 17030 17060	250015 250030 250060 250120 250150	17030 17060	250030 250150	17030 17060	250015 250030 250150	17005 17010 17030 17060	250015 250030 250150	17030 17060	250030 250060 250150	17005 17010 17030 17060	250030 250150	
PVC					17010 17030 17060	250015 250030 250150	17005 17010 17030 17060	250015 250030 250060 250120 250150	17010 17030 17060	250030 250150	17010 17030 17060	250015 250030 250150	17005 17010 17030 17060	250015 250030 250150	17010 17060	250030 250060 250150	17030 17060	250030 250150	
Polystyrene (beadboard)							17005 17010 17030 17060	250015 250030 250060 250120 250150	17010 17030 17060	250030 250150	17010 17030 17060	250015 250030 250150	17005 17010 17030 17060	250015 250030 250150	17030 17060	250030 250060 250150	17030 17060	250030 250150	
Polycarbonate <sup>4</sup>									17010 17030 17060	250030 250150	17010 17030 17060	250015 250030 250150	17005 17010 17030 17060	250015 250030 250150	17030 17060	250030 250060 250150	17030 17060	250030 250150	
Melamine											17010 17030 17060	250015 250030 250150	17005 17010 17030 17060	250015 250030 250150	17010 17060	250030 250060 250150	17030 17060	250030 250150	
ABS													17005 17010 17030 17060	250015 250030 250150	17030 17060	250030 250060 250150	17030 17060	250030 250150	
FRP-epoxy																17030 17060	250030 250060 250150	17030 17060	250030 250150
Polyacrylic																		17030 17060	250030 250150
Polystyrene																			
Fabric/felt/cork																			
Leather																			
SBR																			
Nitrile Rubber <sup>3</sup>																			
Neoprene <sup>3</sup>																			

1 Not recommended for bonding metal, glass and ceramic to itself or each other due to low moisture transmission of substrates.  
 2 Abrade uncoated aluminum. Not for use on uncoated aluminum subjected to hot/humid conditions.  
 3 Rubbers vary in composition. Adhesion to specific rubber must be evaluated by user.  
 4 Adhesive may partially delaminate from polycarbonate at elevated temperatures.  
 For polypropylene and polyethylene, corona or plasma treatment may improve adhesion.

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

# 3M™ Scotch-Weld™ Polyurethane Reactive (PUR) Easy 250 Adhesive Information

Product	Description	Viscosity @ 250°F (121°C) (CPS)	Open Time (Min.)	Set Time (Sec.)	Shore D	Tensile Strength (PSI)	Elongation (%)
<b>Wood Adhesives</b>							
250015	• Fast set time for wood and select plastics	7000	1.5	15	65	3900	750
250060	• Medium set time for wood and select plastics	7000	2	60	60	4200	675
250120	• Medium set time • Low viscosity • Very thin bond line for wood	3000	4	120	60	4000	625
<b>Plastic Adhesives</b>							
250030	• Fast set time for many plastics including polystyrene and polyacrylic	13,000	2	30	50	3900	725
250150	• Long open and set times for wood, plastics, and material combinations such as aluminum or glass to plastics or wood	9000	4	150	45	3300	700

Polystyrene		Fabric/felt/cork		Leather		SBR		Nitrile Rubber <sup>3</sup>		Neoprene <sup>3</sup>		Glass/ceramic		Aluminum <sup>1,2</sup>	
PUR EZ	PUR EZ 250	PUR EZ	PUR EZ 250	PUR EZ	PUR EZ 250	PUR EZ	PUR EZ 250	PUR EZ	PUR EZ 250	PUR EZ	PUR EZ 250	PUR EZ	PUR EZ 250	PUR EZ	PUR EZ 250
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\*Medium Density Fiberboard \*\* Fiber Reinforced Plastic

# 3M™ Scotch-Weld™ Polyurethane Reactive (PUR) Adhesive Systems – stairs, shutters, frames, and more



*Bond and seal wood or plastic stiles and rails in window shutters.*

*Bond staircase risers and runners.*

*Thin bond line to permanently bond miter-cut hardwood or softwood frames.*

1-800-362-3550

[www.3M.com/adhesives](http://www.3M.com/adhesives)

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