



Scotch-Weld™ Hot Melt Bonding Systems

*Design, Assembly and
Packaging Reference Guide*

*Systems
approach to
help you
improve
productivity
and lower
costs.*

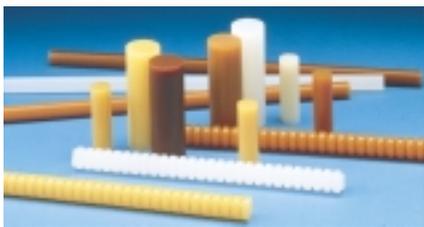


Speed and versatility for many applications

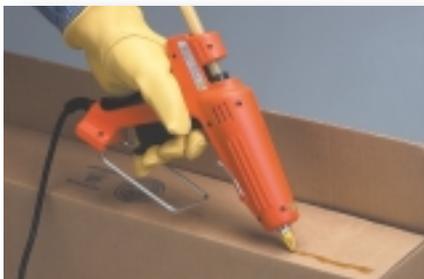
3M™ Scotch-Weld™ Hot Melt Adhesives and Applicators are advanced hand-held systems to help you improve productivity, lower cost, and minimize waste.

Adhesives are 100% solids thermoplastic resins that become fluid when heated and quickly wet the bonding surface. They cool, harden, and reach bond strength in seconds. You can move assemblies immediately to keep production flowing. This helps eliminate clamps, fixturing and drying, and saves time, energy, and space.

Each adhesive is designed and precisely manufactured for efficient use in one of the portable 3M™ Scotch-Weld™ Hot Melt Applicators. Bond wood, plastic, foam, fabric, cardboard, and more.



2



3

Combine 3M™ Scotch-Weld™ Hot Melt General Purpose Adhesive 3750 and the 3M™ Scotch-Weld™ Hot Melt Applicator AE II for a high volume system at a great value. Easily keep up with demanding packaging and wood assembly applications.



4

3M™ Scotch-Weld™ Hot Melt Applicator EC can be used with 3M low temperature (265°F/129°C) adhesive to effectively bond heat-sensitive substrates such as styrene foam.

Adhesives matched to a market and application



5

3738, 3750, 3762*,
3762LM*, 3764

Manual corrugated case and carton sealing

- Corrugated carton closing
- Packaging of subassemblies
- Packaging lightly waxed cartons
- Five panel folded corrugated cartons
- Contract packaging



6

3738, 3747, 3789, 3792*, 3792LM*

Furniture and woodworking

- Upholstered/reupholstered furniture
- Corner spacer blocks
- Drawer bottom stiffener
- Wood drawer guides
- V-groove bonding
- Fabric bonding



7

3748, 3755LM, 3762LM*, 3764,
3792LM*, 3798LM

Point-of-purchase display and trade exhibits

- Corrugated display manufacturing
- Counter top displays
- Exhibitor booth display
- Jewelry case displays
- Polystyrene foam
- Floral displays
- Coated paper stock



8

3748, 3748 VO*, 3764, 3779*, 3797

Electronics and electrical

- Rigidizing components
- Attaching components on PC boards
- Wire fastening
- Potting
- Coil terminating
- Cable strain relief



9

3748, 3764*, 3789, 3792LM*,
3796, 3798LM

Product assembly

- Plastic assembly
- Sand core assembly
- Luggage assembly
- Fabrics and apparel
- Costume design
- Toys and games
- Trophy nameplates
- Sample attachment

* Most typical product for bonding applications in this market.

NOTE: The technical information and data provided above should be considered representative or typical only and should not be used for specification purposes.

Selecting a 3M™ Scotch-Weld™ Hot-Melt Applicator to fit your needs



3M™ Scotch-Weld™
Hot Melt Applicator LT

10



3M™ Scotch-Weld™
Hot Melt Applicator LT with
Quadrack™ Converter

11



3M™ Scotch-Weld™
Hot Melt Applicator TC

12



3M™ Scotch-Weld™
Hot Melt Applicator TC with
Quadrack™ Converter

13



3M™ Scotch-Weld™
Hot Melt Applicator AE II

14



3M™ Scotch-Weld™
Hot Melt Applicator EC

15



3M™ Scotch-Weld™
Hot Melt Applicator PG II LT
with Speedloader

16



3M™ Scotch-Weld™
Hot Melt Applicator PG II
with Speedloader

17

Product Information: 3M™ Scotch-Weld™ Hot Melt Applicators

These lightweight, easy-to-use units use 3M's innovative melt-on-demand or progressive feed technology.

3M™ Scotch-Weld™ Hot Melt Applicator	Weight ⁽¹⁾	Output lb/hr ⁽²⁾	Temperature ⁽³⁾	Adhesive		Accessories Available ⁽⁴⁾ (see keyed photos on back)	Features
				Type	Size dia. x length, inches		
A 3M™ Scotch-Weld™ Hot Melt Applicator LT	10.0 oz.	2.6	265°F (129°C)	LM TC	5/8 x 2	Tips ① ⁽⁴⁾ , Benchstand ⑥, Quadrack™ Converter ②, Palm Trigger③	For use with low melt adhesives
B 3M™ Scotch-Weld™ Hot Melt Applicator LT with Quadrack™ Converter	13.8 oz.	2.6	265°F (129°C)	LM Q	5/8 x 8	Tips ①, Benchstand ⑥	
C 3M™ Scotch-Weld™ Hot Melt Applicator TC	10.0 oz.	3.5	385°F (196°C)	TC	5/8 x 2	Tips ①, Benchstand ⑥, Quadrack™ Converter ②, Palm Trigger③	Easy to use with standard melt adhesives
D 3M™ Scotch-Weld™ Hot Melt Applicator TC with Quadrack™ Converter	13.8 oz.	3.5	385°F (196°C)	Q	5/8 x 8	Tips ①, Benchstand ⑥	
E 3M™ Scotch-Weld™ Hot Melt Applicator AE II	20.0 oz.	4.0	400°F (204°C)	AE	1/2 x 12	Includes stand	All electric operation
F 3M™ Scotch-Weld™ Hot Melt Applicator EC	24.0 oz.	5.5	260°F-450°F (127°-232°C)	Q and LMQ	5/8 x 8	Tips ①, Benchstand ⑥	Temperature modules to operate with standard and low melt adhesives
G 3M™ Scotch-Weld™ Hot Melt Applicator PG II LT with Speedloader	4.3 lbs.	6.0	265°F (129°C)	LM PG	1 x 3	Tips ①, Magazine Feeder ⑦, Heavy-Duty Benchstand ⑤, Benchmount ⑧, Foot Pedal ④	Pneumatic high output for low melt adhesives
H 3M™ Scotch-Weld™ Hot Melt Applicator PG II with Speedloader	4.3 lbs.	7.5	385°F (196°C)	PG	1 x 3	Tips ①, Magazine Feeder ⑦, Heavy-Duty Benchstand ⑤, Benchmount ⑧, Foot Pedal ④	For standard melt adhesives

(1) Weight shown is for applicator only — does not include adhesive capacity. (2) Adhesive output will vary with conditions and the adhesive used. Values are approximate and are based on maximum steady-state flow. (3) Temperatures shown are nominal control values. Actual temperature will range slightly above and below this value. (4) Accessory tips used will depend on applicator selected and adhesive used.

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

Standard melt adhesives dispense at 385°F (196°C). Low melt adhesives dispense at 265°F (129°C) and are for use only in low melt applications.

Product Information: 3M™ Scotch-Weld™ Hot Melt Adhesives

	Product (Color)	FDA Listed Components ⁽¹⁾	UL 94 Listing	Features Application Ideas	Sizes	EC Temp Control Modules	Flash Point (°F/°C)
Low Melt Technology: Applied 250°–270°F (127°–132°C)	3755LM Clear	Y	N/A	• “Delayed-tack” applied in thin-glue-line ribbon for bonding paper, corrugated, chipboard, P.O.P. displays and exhibits	5/8" x 2"TC	N/A	509/265
	3762LM* Lt. Amber	Y	N/A	• Excellent “hot tack”, fast setting • Bonds variety of corrugated packaging, beadboard, recouperage, repacking area • Economical, general purpose • Can bond chipboard and wood	5/8" x 8"Q 1" x 3"PG 5/8" x 2"TC	1	509/265
	3776LM Tan	N/A	N/A	• Bonds variety of plastics, woods and light-gauge metals	5/8" x 8"Q 1" x 3"PG	1	460/238
	3792LM* Clear	Y	V2	• Clear, multi-purpose for wood, coated paper, polyolefins and other heat-sensitive materials • P.O.P. displays	5/8" x 8"Q 1" x 3"PG 5/8" x 2"TC	1	550/288
	3798LM Clear	Y	N/A	• Gummy glue removable adhesive • Strength in seconds, removes easily • A wide variety of substrates • No residual tack	5/8" x 2"TC	N/A	474/246
Hot Melt Technology: Applied 350°–385°F (177°–196°C)	3731*	N	N/A	• High heat resistance • Bonds a variety of plastics including polyethylene and polypropylene	5/8" x 8"Q 1" x 3"PG	5	N/A
	3738* Tan	Y	V2	• High delivery rate and long bonding range • General purpose for foundry sand cores, wood bonding, corrugated, selected plastics and chipboard	5/8" x 8"Q 1" x 3"PG 5/8" x 2"TC 1/2" x 12"AE	4	550/288
	3747 Tan	Y	N/A	• General purpose • Bonds wide variety of plastics, wood and lightweight metals	5/8" x 8"Q 1" x 3"PG 5/8" x 2"TC 1/2" x 12"AE	4	509/265
	3748* Off-white	Y	V2	• Good thermal shock resistance • Non-corrosive to copper for many electronic applications • Bonds polyolefins	5/8" x 8"Q 1" x 3"PG 5/8" x 2"TC	4	536/280
	3748 VO Light Yellow	N	VO	• Self-extinguishing version of 3748 • Meets UL 1410 requirements	5/8" x 8"Q 1" x 3"PG 5/8" x 2"TC	4	536/280
	3750 Tan	N	N/A	• Low viscosity for high flow rate and increased production • Packaging and wood assembly • Good hot tack for quick grab	1/2" x 12"AE	N/A	495/234
	3750 Clear	N	N	• Low viscosity for high flow rate and increased production • Packaging and wood assembly • Good hot tack for quick grab	1/2" x 12"AE	N/A	445/230
	3762 Tan	Y	V2	• Excellent “hot tack”, fast-setting • Economical, general purpose for corrugated packaging, beadboard, recouperage, repacking area • Can bond chipboard and wood	5/8" x 8"Q 1" x 3"PG 5/8" x 2"TC 1/2" x 12"AE	3	500/260
	3764* Clear	Y	V2	• Bonds variety of plastics including polycarbonate, polyethylene, and polypropylene • Flexible at low temperatures	5/8" x 8"Q 1" x 3"PG 5/8" x 2"TC 1/2" x 12"AE	4	514/267
	3779* Amber	Y	VO	• High heat resistance • High strength • Good fuel and oil resistance	5/8" x 8"Q 1" x 3"PG 5/8" x 2"TC	5	550/288
	3789* Brown	Y	V2	• High performance for plastics • Impact resistant • Bonds vinyl and wood • Good fuel and oil resistance	5/8" x 8"Q 1" x 3"PG	5	635/335
	3792* Clear	Y	V2	• Clear, multi-purpose for wood, corrugated, fabric, furniture, upholstery, novelties, and other lightweight materials	5/8" x 8"Q 1" x 3"PG 5/8" x 2"TC 1/2" x 12"AE	4	450/232
	3796 Lt. Tan	N	N/A	• High performance for plastics and light-gauge metals	1" x 3"PG 5/8" x 2"TC	N/A	480/249
	3797 Off-white	Y	V2	• High ball and ring • Low viscosity • Good for electrical potting	1" x 3"PG 5/8" x 2"TC	N/A	570/299
Bulk	3794 Hi Tack PSA Lt. Tan	Y	N/A	• Sprayable for plastic bonding, paper, metals, die-cut labels • Transportation, P.O.P.	2 lb. bricks	N/A	515/268

(1) Made from components listed as indirect food additives under FDA regulations for adhesives (21 CFR 175.105). (2) Brookfield Thermosel Viscometer in Centipoise. (3) ASTM E-28-6-7 (4) On canvas (5) On Douglas Fir (6) 1/8" semicircular bead, Douglas Fir to Douglas Fir.

Viscosity CPS ⁽²⁾	Delivery Time (sec) for 1" x 3" Cartridge**	Ball & Ring Soft Point ⁽³⁾ (°F/°C)	Heat Resistance (°F/°C)	Impact Resistance (in. -lbs.) 72°F (22°C)	Peel Strength PIW ⁽⁴⁾ 72°F (22°C)	Shear Strength PSI ⁽⁵⁾ 72°F (22°C)	Tensile Strength PSI 72°F (22°C)	Elongation %	Bonding Range 1/8" Bead (sec) ⁽⁶⁾
13,000 @250°F	N/A	157/70	120/49	14	13	500	380	400	120
4000 @250°F	45	205/96	130/54	13	6	480	600	300	25
8250 @250°F	47	184/84	140/60	13	9	600	270	600	40
10,500 @250°F	57	178/81	140/60	62	13	350	547	125	40
9500 @250°F	N/A	191/88	120/49	N/A	N/A	N/A	62	250	30
12,000 @375°F	N/A	315/157	265/130	N/A	22	490	N/A	N/A	30
2875 @375°F	35	186/86	130/54	36	13	375	360	1000	50
4100 @375°F	45	220/104	145/63	25	20	430	750	1300	45
5000 @375°F	65	292/144	175/79	24	18	250	375	1100	45
5500 @375°F	65	305/152	175/79	50	15	275	200	1850	30
1900 @375°F	30-40	200/93	125/52	N/A	6	500	N/A	N/A	N/A
4800 @375°F	35-45	178/81	135/57	40	12	250	N/A	N/A	N/A
1870 @375°F	30	201/94	130/54	20	7	545	450	400	35
6000 @375°F	55	190/88	140/60	58	14	390	650	625	40
7000 @375°F	75	325/163	300/149	22	18	700	2100	300	25
5200 @375°F	70	270/132	220/104	40	16	570	520	600	50
5000 @375°F	45	179/81	140/60	42	13	250	400	750	50
23,000 @375°F	120	240/116	200/93	29	29	550	363	930	40
2650 @375°F	55	304/151	170/77	19	10	350	283	98	30
15,000 @325°F	N/A	224/107	120/49	N/A	16	N/A	N/A	N/A	> 60

* Also available in bulk.

** Time to deliver the third consecutive cartridge through PG II or PG II LT @ 80 PSI.

N/A = Not available

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

Accessories to improve your productivity



1 A general purpose tip (.090) is supplied with each 3M™ Scotch-Weld™ Applicator. To increase productivity, optional tips can provide multiple beads, flat ribbons, guided beads for carton sealing, and extended reach.

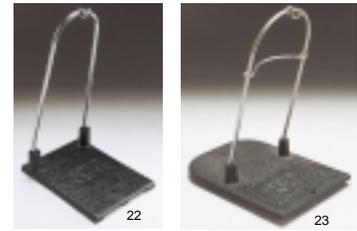
Tip No.	Description
9913	2 Hole Spreader (1/4" hole span)
9916	3 Hole Spreader
9917	3 Hole 1" Spreader for Scotch-Weld™ Applicator II only
9921	.090" Fluted Tip
9922	.063" Fluted Tip
9940	.125" Fluted Tip
9946	.072" Brass Extension for Scotch-Weld™ Applicator II only
9725	Mini Extension Tip .072" Opening for all Scotch-Weld™ Applicators
9726	"T" Tip (shown with valve and adapter) for all Scotch-Weld™ Applicators
9727	"L" Tip (shown with adapter and valve) for all Scotch-Weld™ Applicators
9729	High Viscosity Valve (TC, EC, PG-II)
9785	.070" Tapered Aluminum Extension for all Scotch-Weld™ Applicators
9777	1/4" Slotted Spreader (3755LM adhesive only)
9782	1/2" Slotted Spreader (3755LM adhesive only)
9764	3/4" Slotted Spreader (3755LM adhesive only)



2 **Increase capacity** and ease of operation with Quadrack™ Converter and Palm Trigger.



4 **Foot Pedal**



5 **Heavy-Duty Benchstands** provide added convenience.

Accessories (4, 7, 8) can provide high capacity, hands-free operation for 3M™ Scotch-Weld™ Applicator II and 3M™ Scotch-Weld™ Applicator II LT.

7 **Magazine Feeder**



8 **Benchmark**

IMPORTANT NOTICE: As to the Hot-Melt applicators, spare parts and accessories, 3M provides a warranty as described in the materials which accompany the products. As to the Scotch-Weld™ adhesives, 3M MAKES NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. User is responsible for determining whether the 3M product is fit for a particular purpose and suitable for user's method of application. Please remember that many factors can affect the use and performance of a 3M product in a particular application. The materials to be bonded with the product, the surface preparation of those materials, the product selected for use, the conditions in which the product is used, and the time and environmental conditions in which the product is expected to perform are among the many factors that can affect the use and performance of a 3M product. Given the variety of factors that can affect the use and performance of a 3M product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the 3M product to determine whether it is fit for a particular purpose and suitable for the user's method of application.

LIMITATION OF REMEDIES AND LIABILITY: If a 3M product is proved to be defective, THE EXCLUSIVE REMEDY, AT 3M'S OPTION, SHALL BE TO REFUND THE PURCHASE PRICE OF OR TO REPAIR OR REPLACE THE DEFECTIVE 3M PRODUCT. 3M shall not otherwise be liable for any loss or damages, whether direct, indirect, special, incidental, or consequential, regardless of the legal theory asserted, including, but not limited to, negligence, warranty, or strict liability.



Industrial and Transportation Business Industrial Adhesives and Tapes Division

Customer Response Center
900 Bush Avenue, Building 21-1W-10
St. Paul, MN 55144-1000
www.3M.com/adhesives

3M, Quadrack, and Scotch-Weld are trademarks of 3M

Printed in U.S.A.
© 3M 2006 78-6900-2947-1