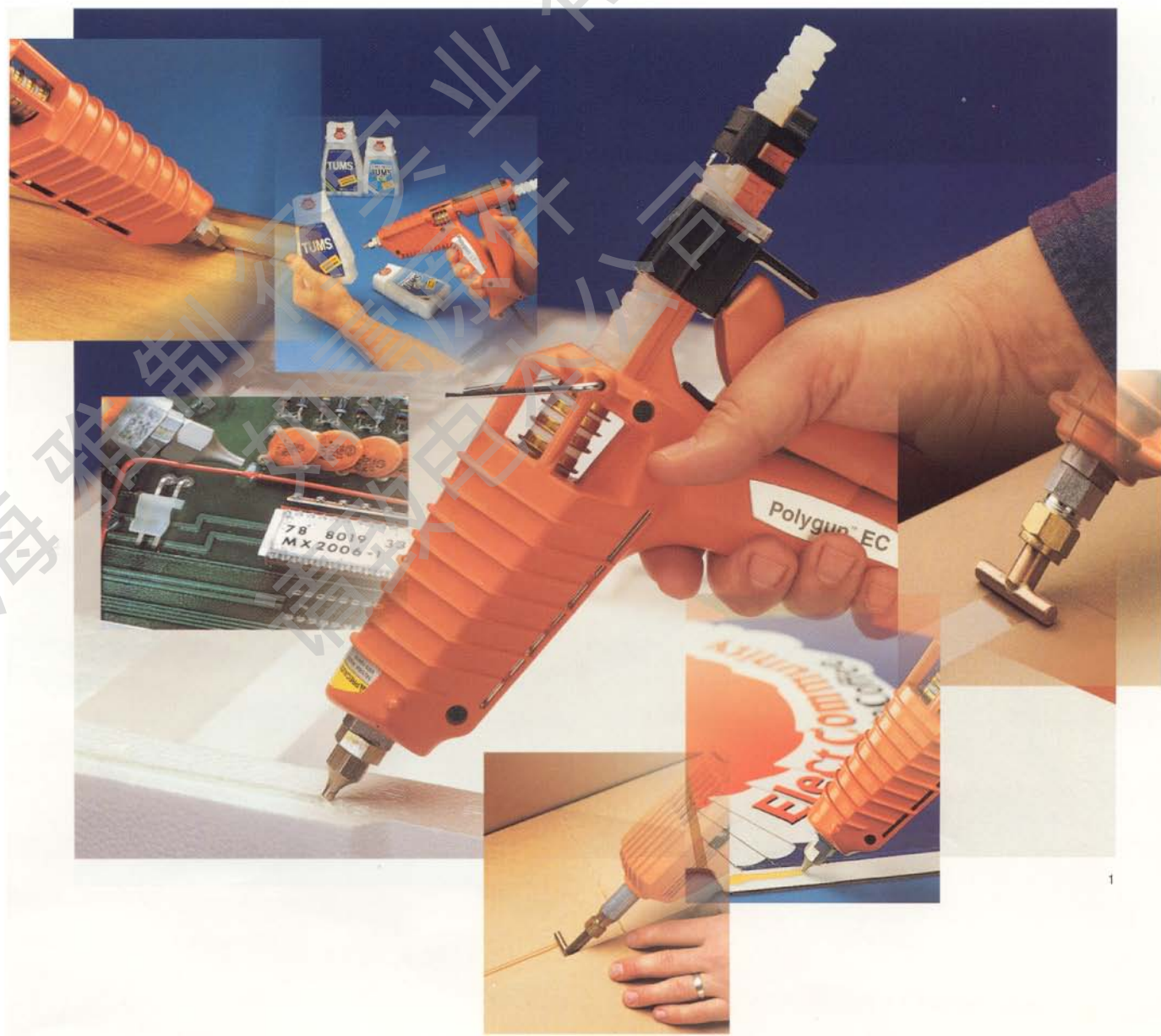




Jet-melt™

Hot Melt Bonding Systems

Design, assembly and packaging reference guide



Jet-melt™ Adhesives and Polygun™ Applicators

The 3M systems approach to help you improve productivity and lower costs.

3M™ Jet-melt™ Adhesives and 3M™ Polygun™ Applicators are engineered to be advanced systems to help you improve productivity, lower cost and minimize waste.

Jet-melt adhesives

Jet-melt adhesives are 100% solids thermoplastic resins. When heated, they become fluid and quickly wet the bonding surface. Upon cooling, they harden and

usually reach bond strength in seconds.

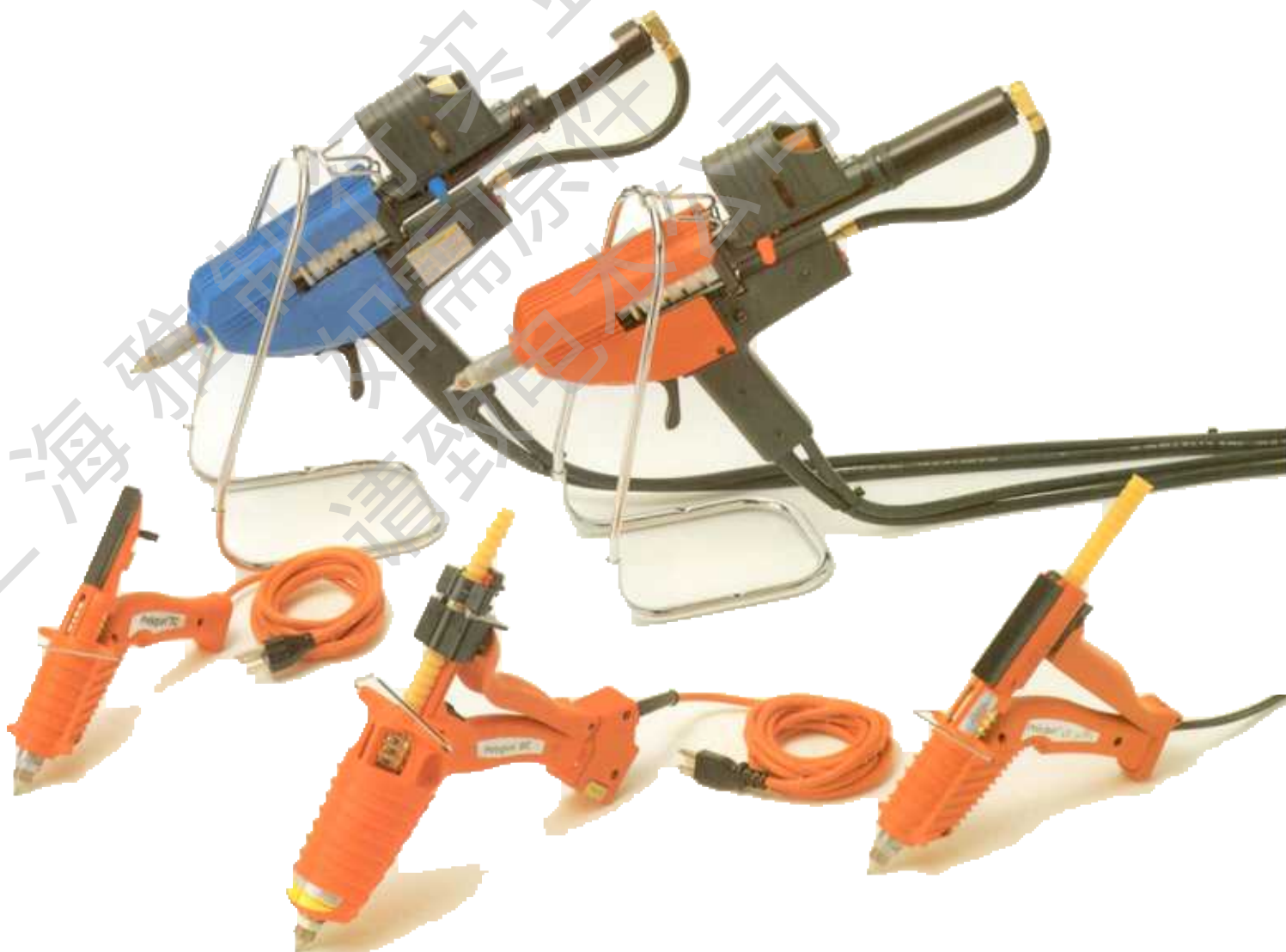
You can move assemblies immediately to keep production flowing. This helps eliminate clamps, fixturing and drying, and save time, energy and space.

Each adhesive is designed and precisely manufactured for efficient use in one of the portable Polygun applicators.

Polygun applicators

These are lightweight, easy-to-use units using 3M's innovative melt-on-demand or progressive feed technology. A technology proven in applications throughout industry.

Select from several adhesives and applicators to meet your requirements.



Information for selecting a 3M™ Polygun™ Applicator to fit your needs



A Polygun LT Applicator



B Polygun LT with Quadrack Converter and Palm Trigger



C Polygun TC Applicator



D Polygun TC with Quadrack Converter and Palm Trigger



E Polygun AE Applicator



F Polygun EC Applicator



G Polygun II LT Applicator with Speedloader



H Polygun II Applicator with Speedloader

Photo	Polygun Applicator	Weight ¹	Output ² lb/hr	Temperature ³	Adhesive		
					Type	Size dia. x length, inches	Capacity No. of sticks (grams)
A	Polygun LT	10.0 oz.	2.6	265°F (129°C)	LM TC	5/8 x 2	1 (8)
B	Polygun LT with Quadrack Converter and Palm Trigger	13.8 oz.	2.6	265°F (129°C)	LM Q	5/8 x 8	1 (31)
C	Polygun TC	10.0 oz.	3.5	385°F (196°C)	TC	5/8 x 2	1 (8)
D	Polygun TC with Quadrack Converter and Palm Trigger	13.8 oz.	3.5	385°F (196°C)	Q	5/8 x 8	1 (31)
E	Polygun AE	17.5 oz.	2.0	350°F (177°C)	AE	1/2 x 12	1 (33)
F	Polygun EC	24.0 oz.	5.5	260° - 450°F (127° - 232°C)	Q and LMQ	5/8 x 8	1 (31)
G	Polygun II LT with Speedloader	4.3 lbs.	6.0	265°F (129°C)	LM PG	1 x 3	3 (36)
H	Polygun II with Speedloader	4.3 lbs.	7.5	385°F (196°C)	PG	1 x 3	3 (36)

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.

Please Note:

There are two types of 3M™ Jet-melt™ Adhesives: **standard hot melt adhesives** and **several low temperature adhesives**. The low temperature formulas are referred to as 3M™ Jet-melt™ Low-Melt Adhesives. The **standard hot melt adhesives dispense at 385°F (196°C)** and the **low-melt adhesives dispense at 265°F (129°C)**. **Low-melt adhesives are designed for use on heat sensitive substrates or wherever operator safety is a concern.**

- Jet-melt low-melt (LM) adhesives are to be used only in the following applicators:

Note: These applicators are for dispensing low temperature products only:

- 3M™ Polygun™ LT Applicator
- 3M™ Polygun™ LT Applicator with Quadrack Converter
- 3M™ Polygun™ II LT Applicator
- 3M™ Polygun™ EC Applicator (temperature module #1)

Remember! Jet-melt adhesives with the blue label are to be used only in the low temperature Polygun applicators.

- Jet-melt™ low-melt (LM) adhesives are ***NEVER*** to be used with the following Polygun applicators.

- 3M™ Polygun™ TC Applicator (Touch Control)
- 3M™ Polygun™ TC Applicator with Quadrack Converter
- 3M™ Polygun™ AE Applicator
- 3M™ Polygun™ II Applicator
- 3M™ Polygun™ EC Applicator (temperature modules #3, #4, and #5)

Features	Volts	Watts	Air psi	Accessories Available*
Easy to use, simple and rugged construction. Designed exclusively for low-melt Jet-melt adhesives.	120	150	N/A	Tips ①, Benchstand ⑥, Quadrack Converter ②, Palm Trigger ③
Same as above equipped with Quadrack Converter and Palm Trigger.	120	150	N/A	Tips ①, Benchstand ⑥
Easy to use, simple and rugged construction. Designed for standard melt Jet-melt adhesive.	120	150	N/A	Tips ①, Benchstand ⑥, Quadrack Converter ②, Palm Trigger ③
Same as above equipped with Quadrack Converter and Palm Trigger.	120	150	N/A	Tips ①, Benchstand ⑥
All electric. Designed for low-medium volume industrial applications.	120	100	N/A	Tips ①
Most versatile. Uses pre-set temperature modules to operate with most Jet-melt adhesives - both standard and low-melt. Stroke adjuster allows repeatable output quantities. Ergonomic palm trigger and on-off switch.	120	350	N/A	Tips ①, Benchstand ⑥
Pneumatic high output applicator designed exclusively for low-melt Jet-melt adhesives. Trigger regulator provides output control. Lighted on-off switch. Supplied with tubular benchstand. Note: Illustration shows optional Heavy Duty Benchstand ⑤	120	500	40-80	Tips ①, Magazine Feeder ⑦, Heavy Duty Benchstand ⑤, Benchmount ⑧, Foot Pedal ④, Pneumatic Timer (not shown)
Pneumatic high output applicator designed for standard melt adhesives. Trigger regulator provides output control. Lighted on/off switch. Supplied with tubular benchstand.	120	500	40-80	Tips ①, Magazine Feeder ⑦, Heavy Duty Benchstand ⑤, Benchmount ⑧, Foot Pedal ④, Pneumatic Timer (not shown)

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

3M™ Jet-melt™ Adhesive Product Information

PRODUCT NUMBER AND COLOR	FDA LISTED COMPONENTS ¹	UL 94 LISTING	FEATURES/APPLICATION IDEAS	SIZES	EC TEMP. CONTROL MODULES	FLASH POINT ("F"/"C)
LOW-MELT TECHNOLOGY: Applied at only 265°F (129°C), these Jet-melt "LM" adhesives can bond many he						
3755-LM Clear	Y	N/A	"Delayed-tack" applied in thin-glue-line ribbon for bonding paper, corrugated, chipboard, P.O.P. displays and exhibits.	⅝" x 2"TC	N/A	509/265
3762-LM Lt. Amber	Y	N/A	Excellent "hot tack", fast setting. Bonds to a variety of corrugated packaging, beadboard, recoupage, repacking area. Economical, general purpose. Can bond chipboard and wood.	⅝" x 8"Q 1" x 3"PG ⅝" x 2"TC	1	509/265
3776-LM Tan	N/A	N/A	Bonds to a variety of plastics, woods and light gauge metals.	⅝" x 8"Q 1" x 3"PG	1	460/238
3792-LM Clear	Y	V2	Clear, multi-purpose product for wood, coated paper, polyolefins and other heat-sensitive materials. P.O.P. displays.	⅝" x 8"Q 1" x 3"PG ⅝" x 2"TC	1	550/288
3798-LM Clear	Y	N/A	Gummy Glue Removable Adhesive, strength in seconds, removes easily. Can be used on a wide variety of substrates.	⅝" x 2"TC	N/A	474/246
HOT MELT TECHNOLOGY: Applied at 350°- 385°F (177°-196°C)						
3738 Tan	Y	V2	High delivery rate and long bonding range. General purpose for foundry sand cores, wood bonding, corrugated, selected plastics and chipboard.	⅝" x 8"Q 1" x 3"PG ⅝" x 2"TC ½" x 12"AE	4	550/288
3747 Tan	Y	N/A	General purpose adhesive. Bonds to a wide variety of plastics, wood and lightweight metals.	⅝" x 8"Q 1" x 3"PG ⅝" x 2"TC ½" x 12"AE	4	509/265
3748 Off-white	Y	V2	Good thermal shock resistance. Good for many electronic applications. Non-corrosive to copper. Bonds polyolefins.	⅝" x 8"Q 1" x 3"PG ⅝" x 2"TC	4	536/280
3748 VO Light Yellow	N	VO	Self-extinguishing version of 3748. Adhesive meets UL 1410 requirements.	⅝" x 8"Q 1" x 3"PG ⅝" x 2"TC	4	536/280
3762 Tan	Y	V2	Excellent "hot tack", fast-setting. Bonds to a variety of corrugated packaging, beadboard, recoupage, repacking area. Economical, general purpose. Can bond chipboard and wood.	⅝" x 8"Q 1" x 3"PG ⅝" x 2"TC ½" x 12"AE	3	500/260
3764 Clear	Y	V2	Bonds to a variety of plastics including polycarbonate, polyethylene and polypropylene. Flexible at low temperatures.	⅝" x 8"Q 1" x 3"PG ⅝" x 2"TC ½" x 12"AE	4	514/267
3779 Amber	Y	VO	High heat resistance. High strength. Good fuel and oil resistance. Electronics.	⅝" x 8"Q 1" x 3"PG ⅝" x 2"TC	5	550/288
3789 Brown	Y	V2	High performance for plastics. Impact resistant. Also bonds vinyl and wood. Good fuel and oil resistance.	⅝" x 8"Q 1" x 3"PG	5	635/335
3792 Clear	Y	V2	Clear, multi-purpose product for wood, corrugated, lightweight substrates. Furniture, upholstery, novelties. Can bond fabric and other lightweight materials.	⅝" x 8"Q 1" x 3"PG ⅝" x 2"TC ½" x 12"AE	4	450/232
3796 Lt. Tan	N	N/A	High performance for plastics and light gauge metals.	1" x 3"PG ⅝" x 2"TC	N/A	480/249
3797 Off-white	Y	V2	High ball and ring. Low viscosity. Good for electrical potting applications.	1" x 3"PG ⅝" x 2"TC	N/A	570/299

¹Made from components listed as indirect food additives under FDA regulations for adhesives (21 CFR 175.105).

²Brookfield Thermosel Viscometer in Centipoise. ³ASTM E-28-6-7

⁴On canvas ⁵On Douglas Fir

⁶1/8" semicircular bead, Douglas Fir to Douglas Fir.

⁷Time to deliver the third consecutive cartridge through PG II or PG II LT @ 80 PSI.

VISCOSITY CPS ^a	DELIVERY ^a TIME (SEC.) FOR 1" x 3" CARTRIDGE	BALL & RING SOFT POINT ^a (°F/°C)	HEAT RESISTANCE ^a (°F/°C)	IMPACT RESISTANCE (IN.-LBS.) 72°F (22°C)	PEEL STRENGTH PIW ^a 72°F (22°C)	SHEAR STRENGTH PSI ^a 72°F (22°C)	TENSILE STRENGTH PSI 72°F (22°C)	ELONGATION %	BONDING RANGE 1/8" BEAD (SEC.) ^b
sensitive substrates such as styrene foam.									
13000 @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
10500 @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
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
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

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

Accessories to improve your productivity



Tip No.	Description
9913	2 Hole Spreader (1/4" hole span)
9916	3 Hole Spreader
9917	3 Hole 1" Spreader for Polygun II Applicator only
9921	.090" Fluted Tip
9922	.063" Fluted Tip
9940	.125" Fluted Tip
9946	.072" Brass Extension for Polygun II Applicator only
9725	Mini Extension Tip .072" Opening for all Polygun Applicators
9726	"T" Tip (shown with valve and adapter) for all Polygun Applicators
9727	"L" Tip (shown with adapter and valve) for all Polygun Applicators
9729	High Viscosity Valve (TC, EC PG-II)
9785	.070" Tapered Aluminum Extension for all Polygun Applicators
9777	1/4" Slotted Spreader (3755-LM adhesive only)
9782	1/2" Slotted Spreader (3755-LM adhesive only)
9764	3/4" Slotted Spreader (3755-LM adhesive only)
9768	1" Slotted Spreader (3755-LM adhesive only)

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



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

- 4 Foot Pedal
Accessories (4, 7, 8) can provide high capacity, hands-free operation for Polygun II and Polygun II LT.



- 5 6
Heavy Duty Benchstands provide added convenience.



- 7 Magazine Feeder
8 Benchmount

IMPORTANT NOTICE: As to the Polygun applicators, spare parts and accessories, 3M provides a warranty as described in the materials which accompany the products. As to the Jet-melt 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 Business
Industrial Adhesives and Tapes Division
3M Center, Building 21-1W-10, 900 Bush Avenue
St. Paul, MN 55106
1-800-362-3550
www.3M.com/adhesives



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