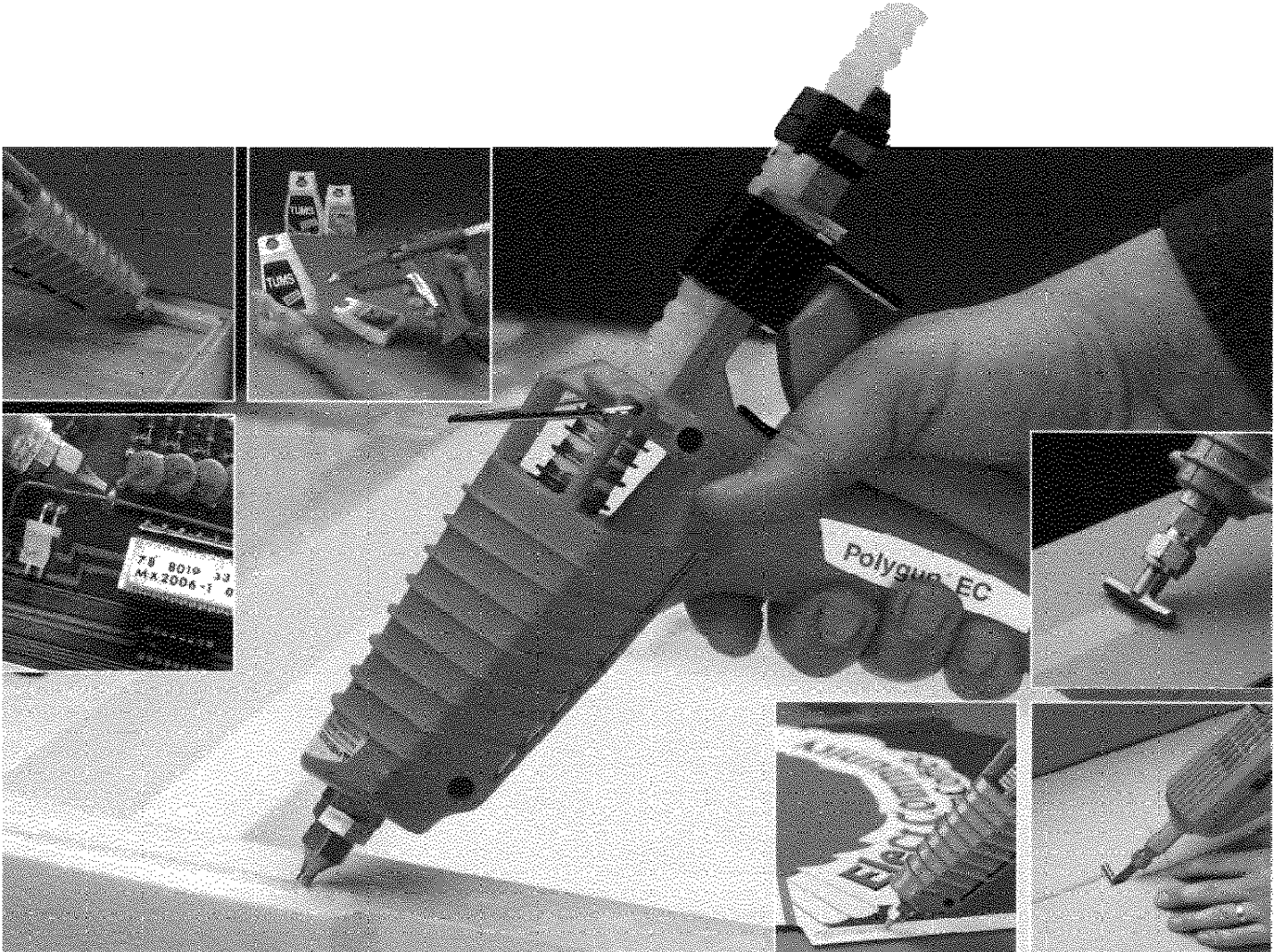


3M

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.

Jet-melt brand Adhesives and Polygun brand 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.

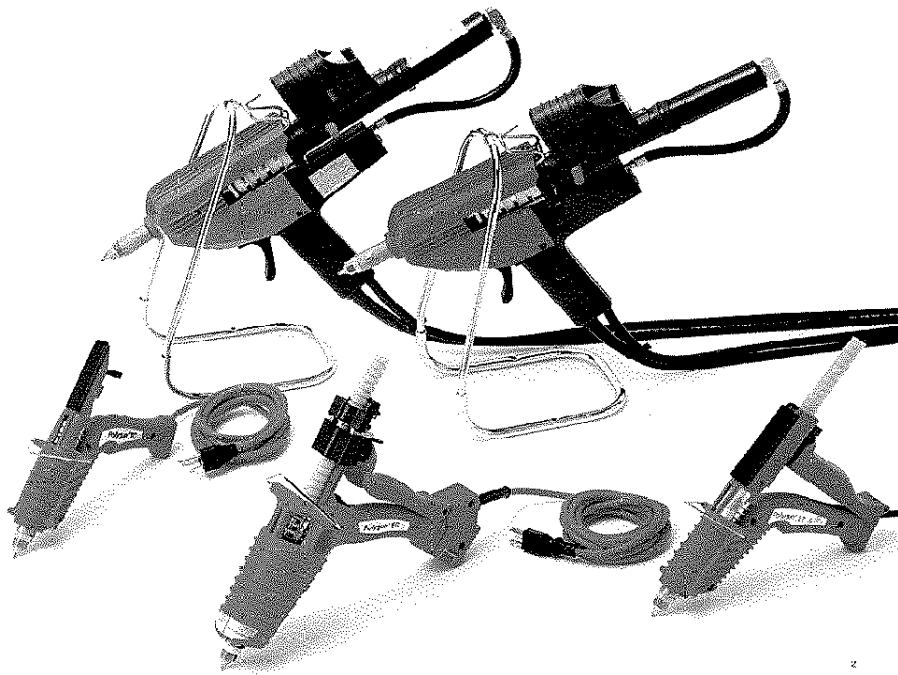
You can move assemblies immediately to keep production flowing. Plus, eliminate clamps, fixturing and drying. This helps save time, energy and space.

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

Polygun applicators

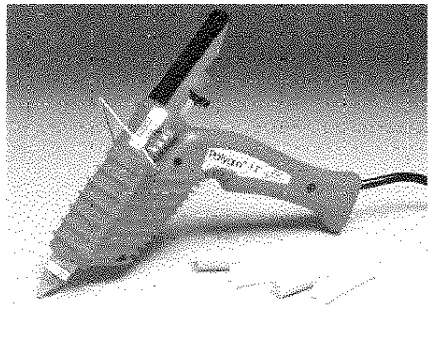
These are lightweight, easy-to-use units using 3M's innovative melt-on-demand or progressive feed technology. A technology proven in applications throughout industry.

Select from 17 adhesives and five applicators to meet your requirements.



Selecting a Polygun applicator for temperature and volume

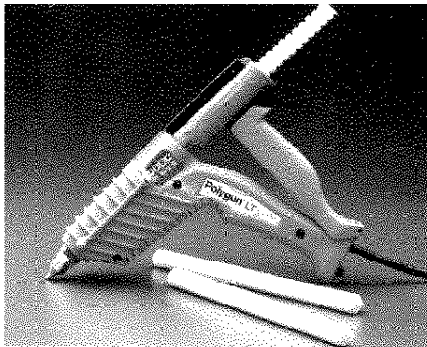
Low temperature applicators



3

Polygun LT Applicator – Designed exclusively for low-melt Jet-melt adhesives. Delivers up to **2.6 pounds** of adhesive per hour.

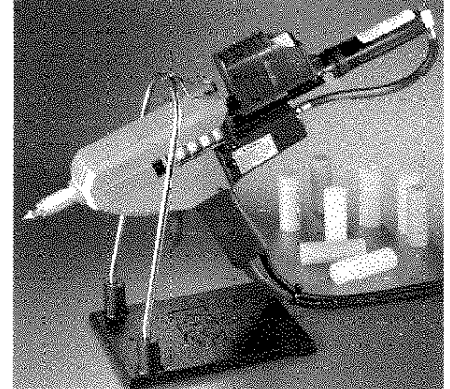
Weight: 10 oz.
Watts: 150
Voltage: 120 VAC
Temperature: 265°F (129°C)
Cartridge size: 5/8" x 2", TC



4

Polygun LT Applicator (shown with optional Quadrack™ Converter) – Designed exclusively for low-melt Jet-melt adhesives. Delivers up to **2.6 pounds** of adhesive per hour.

Weight: 13.8 oz.
Watts: 150
Voltage: 120 VAC
Temperature: 265°F (129°C)
Cartridge size: 5/8" x 8",
 Quadrack™ stick



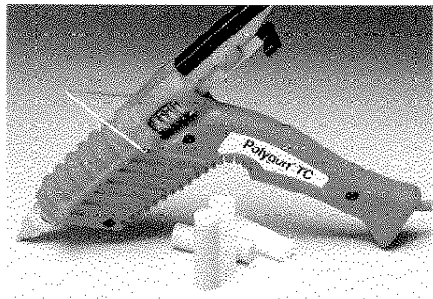
Shown with optional heavy duty bench stand.

5

Polygun II LT Applicator – Designed exclusively for low-melt Jet-melt adhesives. Pneumatic, high volume applicator for up to **6 pounds** of adhesive per hour.

Weight: 4.3 lbs.
Watts: 500
Voltage: 120 VAC
Air: 40-80 psi
Temperature: 265°F (129°C)
Cartridge size: 1" x 3", PG

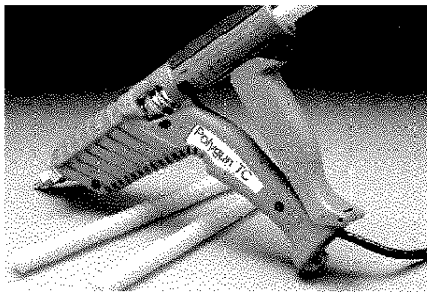
High temperature applicators



6

Polygun TC Applicator – Delivers up to **3.5 pounds** of Jet-melt adhesive per hour.

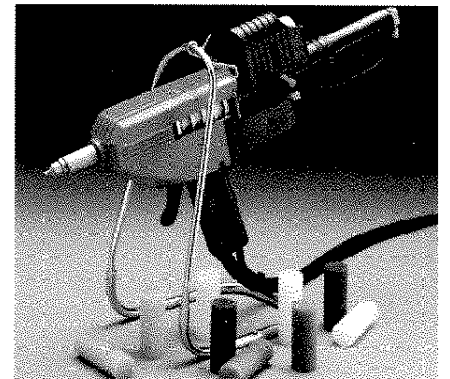
Weight: 10 oz.
Watts: 150
Voltage: 120 VAC
Temperature: 385°F (196°C)
Cartridge size: 5/8" x 2", TC



7

Polygun TC Applicator (shown with optional Quadrack™ Converter and palm trigger) – Delivers up to **3.5 pounds** of Jet-melt adhesive per hour.

Weight: 13.8 oz.
Watts: 150
Voltage: 120 VAC
Temperature: 385°F (196°C)
Cartridge size: 5/8" x 8",
 Quadrack stick



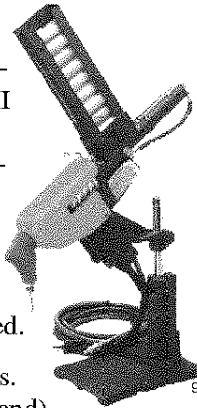
8

Polygun II Applicator – Pneumatic high-volume applicator delivers up to **7.5 pounds** of Jet-melt adhesive per hour.

Weight: 4.3 lbs.
Watts: 500
Voltage: 120 VAC
Air: 40-80 psi
Temperature: 385°F (196°C)
Cartridge size: 1" x 3", PG

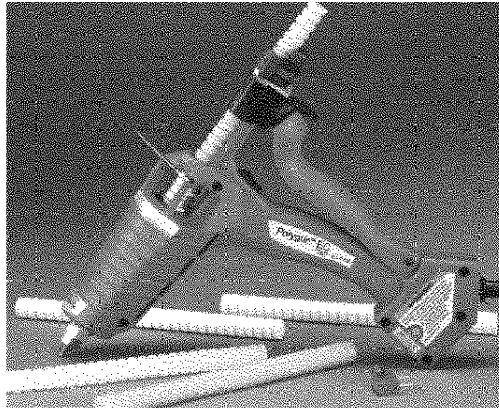
Speedloader Magazine Feed...

modifies the bench-mounted Polygon II or Polygon II LT applicator for semi-automatic adhesive loading. Carries up to 12 Jet-melt adhesive cartridges for production speed.



Weight: 15.2 lbs. (Polygon and stand)
Watts: 500
Voltage: 120 VAC
Air: 40-80 psi
Cartridge size: 1"x 3", PG

Multiple temperature applicator

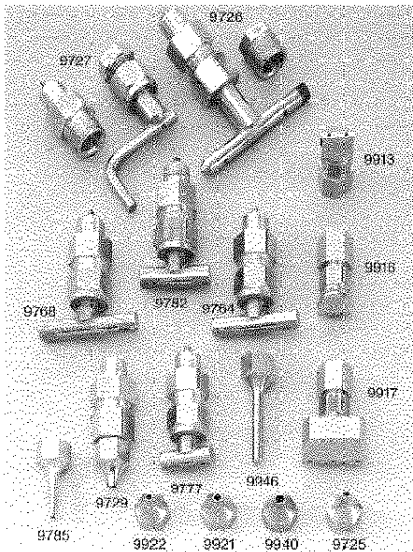


Weight: 24 oz.
Watts: 350
Voltage: 120 VAC
Temperature: 260-450°F (127-232°C)
Cartridge size: 5/8" x 8" Quadrack stick
Adhesive output: 2.6 to 5.5 pounds per hour

Polygon EC Applicator –

The versatile applicator for a wide range of jobs. Provides multiple temperatures with choice of pre-set temperature module kits that insert into the handle. Capable of dispensing new low melt Jet-melt adhesives.

Polygon accessories

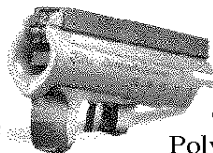


Tip No.	Description	Stock No.
9913	2 Hole Spreader (1/4" hole span, 1/2" wide)	62-9913-9930-4
9916	3 Hole Spreader	62-9916-9930-7
9917	3 Hole 1" Spreader for Polygon II Applicator only	62-9917-9930-5
9921	.090" Fluted Tip	62-9921-0066-9
9922	.063" Fluted Tip	62-9922-0066-7
9940	.125" Fluted Tip	62-9940-6920-1
9946	.072" Brass Extension for Polygon II Applicator only	62-9946-6980-2
9725	Mini-Extension Tip .072" Opening (TC, LT, HP)	62-9725-9930-2
9726	"T" Tip (shown with valve and adapter) for all Polygon Applicators	62-9726-9930-0
9727	"L" Tip (shown with adapter and valve) for all Polygon Applicators	62-9727-9930-8
9729	High Viscosity Valve (TC, HP PG-II)	62-9729-9930-4
9785	.070" Tapered Aluminum Extension (TC, LT, HP)	62-9785-9930-6
9777	1/4" Slotted Spreader (3755-LM adhesive only)	62-9777-9930-3
9782	1/2" Slotted Spreader (3755-LM adhesive only)	62-9782-9930-3
9764	3/4" Slotted Spreader (3755-LM adhesive only)	62-9764-9930-1
9768	1" Slotted Spreader (3755-LM adhesive only)	62-9768-9930-3

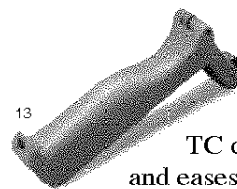
Job-tailored applicator tips –

Every Polygon applicator comes with a standard tip engineered for optimum general purpose use. To maximize productivity on specific jobs, however, you can select from a variety of optional tips and spreaders.

12 **Quadrack Converter** increases the capacity of Polygon TC or LT applicators. Simple feed mechanism eliminates linkage failure often experienced with trigger-type hand applicators. Adhesive flow is continuous with smooth, even beads.



13 **Unique palm trigger** attaches to any Polygon TC or LT applicator and eases operation for small hands or continuous operation.



Jet-melt Adhesive Product Information

PRODUCT NUMBER COLOR	FDA LISTED COMPONENTS ¹⁾ LISTING	UL 94 LISTING	FEATURES/APPLICATION IDEAS	SIZES	TEMP. CONTROL SETTING	FLASH POINT (°F/°C)	AUTO IGNITION (°F/°C)	VISCOSITY (cP) ²⁾	DELIVERY RATE (SEC.) FOR 1" X 3" CARTRIDGE	BALL & RING SOFT POINT ³⁾ (°F/°C)	HEAT RESISTANCE (°F/°C)	IMPACT RESISTANCE (IN.-LBS.)		PEEL STRENGTH (PIV 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⁾	
												0°F (-18°C)	72°F (22°C)						
LOW-MELT TECHNOLOGY: Applied at only 265°F (129°C), these Jet-melt "LM" adhesives can bond many heat-sensitive substrates such as styrene foam.																			
3755-LM Clear	Y	NA	"Delayed-tack" applied in thin-glu-line ribbon for bonding paper, corrugated, chipboard, POP displays and exhibits.	3/8" X 2"	NA	516/236	586/296	1300@250F	NA	65/770	120/49	10	14	13	500	380	400	120	
3762-LM Lt Amber	Y	V-2	Improved "hot tack" when dispensed at low melt temperature. Can bond headboard, corrugated, displays	1" X 3" 3/8" X 6"	1	516/236	546/236	400@250F	46	206/916	130/64	10	13	6	490	600	300	25	
3776-LM Tan	N/A	NA	Can bond many lightweight materials to light gauge metal. Medium heat resistance.	1" X 3" 3/8" X 6"	1	469/238	627/330	8250	47	194/94	140/60	9	13	9	600	270	600	40	
3779-LM Tan	N/A	NA	Can bond many wood and wood-like products, as well as many plastics.	1" X 3" 3/8" X 6"	1	536/290	683/692	7000	46	198/96	140/60	10	14	8	435	300	130	40	
3792-LM Clear	Y	V-2	Long bonding range when dispensed at low melt temperature. Can bond woods, PO, P displays, corrugated, polyolefins, and other lightweight materials.	1" X 3" 3/8" X 6"	1	560/298	574/301	1600@250F	67	179/91	140/60	11	62	13	360	547	125	40	

HOT MELT TECHNOLOGY

3729 Tan	Y	V-2	High delivery and long bonding range. General purpose for foundry sand cores, exhibits, wood bonding, corrugated, and chipboard.	1" X 3" 1/2" X 12" 3/8" X 6"	4	560/298	603/428	2975	36	188/96	130/64	13	36	13	375	380	1000	50
3747 Tan	Y	N/A	General purpose including plastic and wood. Good thermal stability. Good heat resistance and flexibility. Medium performance. Can bond light gauge metal, wood.	1" X 3" 1/2" X 12" 3/8" X 6"	4	516/236	572/300	4100	46	220/104	146/63	11	26	20	400	750	1300	45
3748 Off-white	Y	V-2	Good thermal and electrical properties. Non-corrosive to copper. Can bond polypropylene, polyethylene.	1" X 3" 3/8" X 6"	4	536/290	626/630	5000	66	292/144	175/79	11	24	18	260	375	1100	45
3749 VO Light Yellow	N	V0	Self-extinguishing version of 3748 adhesive meets UL 94 V-0. UL 1410 requirements. Can bond FRP, epoxy board, polypropylene.	1" X 3" 3/8" X 6"	4	536/290	626/630	5500	66	306/152	175/79	10	50	15	275	200	1650	30
3762 Tan	Y	V-2	Excellent "hot tack", fast-setting for corrugated packaging, reoverage, repacking area, warehouse. Low cost, general purpose. Can bond chipboard, wood.	1" X 3" 1/2" X 12" 3/8" X 6"	3	510/260	776/413	1870	30	207/94	130/64	11	20	7	545	460	400	35
3764 Clear	Y	V-2	Can bond many plastics. Good impact resistance at low temperature. Can bond ABS, polycarbonate, rigid PVC, polypropylene, polyethylene.	1" X 3" 1/2" X 12" 3/8" X 6"	4	514/267	607/431	6000	55	190/98	140/60	14	58	14	390	660	625	40
3779 Amber	Y	V0	Good electrical properties with high heat resistance for potting, wire sleeving. UL 94 V-0. Good die and oil resistance.	1" X 3" 3/8" X 6"	5	560/298	665/479	7000	75	326/163	300/149	11	22	18	700	2100	300	25
3783 Brown	Y	V-2	Multi-purpose with heat and impact resistance. Can bond many plastics and light gauge metals.	1" X 3" 3/8" X 6"	NA	469/249	627/442	10000	60	190/98	146/63	12	38	22	500	900	500	45
3789 Brown	Y	V-2	High performance for plastic. Impact resistant. Also can bond wood, vinyl, ABS, FRP.	1" X 3" 3/8" X 6"	5	636/336	702/372	5200	70	270/132	220/104	14	40	16	570	520	600	50
3792 Clear	Y	V-2	Clear multi-purpose product for wood, corrugated, lightweight substrates. Furniture, upholstery, novelties. Can bond fabric and other lightweight materials.	1" X 3" 1/2" X 12" 3/8" X 6"	4	460/232	600/427	5000	46	179/91	140/60	13	42	13	260	400	750	50
3796 Lt Tan	N	N/A	Multi-purpose with heat resistance. High performance for plastics and light gauge metals.	1" X 3" 3/8" X 6"	NA	469/249	662/660	7500	120	240/116	200/63	13	29	29	560	363	630	40
3797 Lt Grey	Y	V-2	Good electrical properties, good flow and heat resistance for potting.	1" X 3" 3/8" X 6"	NA	570/299	700/371	2660	66	304/151	170/77	9	19	10	360	283	96	30

(1) Made from components listed as indirect food additives under FDA regulations for adhesives.
 (2) ASTM E-28-6-7

(3) Brockfield Thermoseal Viscometer
 In Containers
 On Canvas

(4) On Douglas Fir
 (5) On Douglas Fir
 (6) 1/8" semicircular bead, Douglas Fir to Douglas Fir

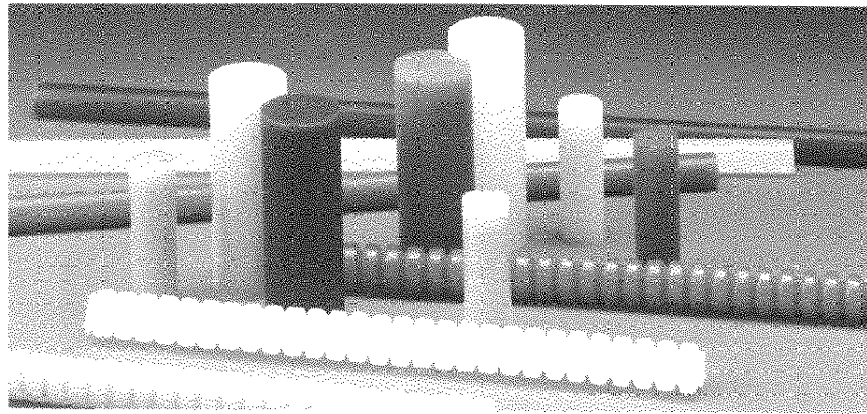
NOTE: The technical information and data provided above should be considered representative or typical only and should not be used for specification purposes.

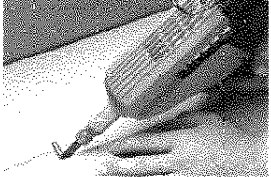

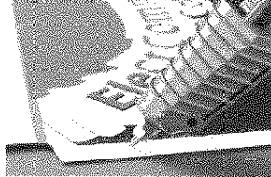




Selecting adhesives for the application...

Jet-melt adhesives provide a versatile line of high performance formulations for fast, strong bonds on a variety of surfaces – wood, plastic, foam, fabric, cardboard, rubber, and more.

14



Jet-melt Adhesive	Typical Markets	Application Ideas
3738 3762* 3762 LM* 3764	 <p>Manual corrugated case and carton sealing</p> <p>15</p>	<ul style="list-style-type: none"> • Corrugated carton closing • Packaging of subassemblies • Packaging lightly waxed cartons • Five panel folded corrugated cartons • Contract packaging
3747 3778 LM* 3789 3792* 3792 LM*	 <p>Furniture and woodworking</p> <p>16</p>	<ul style="list-style-type: none"> • Upholstered/reupholstered furniture • Corner spacer blocks • Drawer bottom stiffener • Wood drawer guides • V-groove bonding • Fabric bonding
3748 3755 LM 3762 LM* 3764 3792 LM*	 <p>Point-of-purchase display and trade exhibits</p> <p>17</p>	<ul style="list-style-type: none"> • Corrugated display manufacturing • Counter top displays • Exhibitor booth display • Jewelry case displays • Polystyrene foam • Floral displays • Coated paper stock
3748 3748 VO* 3764 3779* 3797	 <p>Electronics and electrical</p> <p>18</p>	<ul style="list-style-type: none"> • Rigidizing components • Attaching components on PC boards • Wire fastening • Potting • Coil terminating • Cable strain relief
3748* 3764* 3789 3792 LM* 3796	 <p>Industrial product assembly</p> <p>19</p>	<ul style="list-style-type: none"> • Plastic assembly • Sand core assembly • Luggage assembly • Fabrics and apparel • Costume design • Toys and games • Trophy nameplates

* Most typical product for bonding applications in this market.

Copy and Fax this page to 3M Industrial Tape and Specialties Division

Jet-melt Adhesives and Polygun Applicators

Describe your final assembled product.

Identify what you are bonding.

Is your application:

- In Design Stage In Production
 Have a 3M Sales Representative call me.
 Have a 3M Sales Representative contact me in person.
 I would like to receive samples for evaluation.

Name: _____
 Company: _____ Title: _____
 Address: _____
 City/State/Zip: _____
 Phone: _____
 Fax: _____

Copy and Fax to 612-736-4776.

For details contact your nearest 3M branch office or authorized 3M ITSD adhesives distributor.

Alaska

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 Anchorage, AK 99515
 Phone: 907/522-5200
 Fax: 907/522-1645

Atlanta

2860 Bankers Industrial Dr.
 Atlanta, GA 30360-2764
 Phone: 800/241-6932
 404/447-7000
 FAX: 800/699-7839
 404/242-2432

Chicago

6850 South Harlem Ave.
 Bedford Park, IL
 60501-1956
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 708/496-6500
 FAX: 800/421-2482
 708/496-6511

Dallas

2121 Santa Anna Ave.
 Dallas, TX 75228-1698
Mail: PO Box 28158
 Dallas, TX
 75228-0158
 Phone: 800/241-2976
 214/324-8100
 Fax: 800/562-9037
 214/324-8225

Detroit

22100 Telegraph Road
 Southfield, MI 48034
Mail: PO Box 358
 Southfield, MI
 48037-0358
 Phone: 800/241-0184
 810/827-2450
 Fax: 800/544-3091
 810/827-6936

Hawaii

4443 Malaai Street
 Honolulu, HI 96820
Mail: PO Box 30048
 Honolulu, HI 96820
 Phone: 808/422-2721
 Fax: 808/422-9557

Los Angeles

6023 South Garfield Ave.
 Los Angeles, CA 90040
Mail: PO Box 54019
 Los Angeles, CA
 90054
 Phone: 800/241-4819
 213/726-6300
 Fax: 800/648-0865
 213/726-6462

New York

15 Henderson Drive
 West Caldwell, NJ
 07007-6689
Mail: PO Box 2076
 West Caldwell, NJ
 07007-2076
 Phone: 800/524-0399
 201/575-2000
 Fax: 800/447-2053
 201/575-2172

Minneapolis/St. Paul

3130 Lexington Ave. South
 Eagan, MN 55121
Mail: PO Box 33211
 St. Paul, MN 55133
 Phone: 800/241-4820
 612/733-3300
 Fax: 800/241-9553
 612/737-9420

Northern Mexico

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 El Paso, TX 79935
 Phone: 915/599-4696
 FAX: 915/599-4688

Canada

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 1840 Oxford St. East
 London, Ontario, Canada
 N6A 4T1
 Phone: 519/451-2500
 FAX: 519/452-6262

Mexico

Phone: 525/626-0400
 FAX: 525/728-2299

Puerto Rico

Puerto Rico Industrial Park
 P.O. Box 100
 Carolina, PR 00986-0100
 Phone: 809/750-3000
 FAX: 809/757-1955

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 ITSD 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 ITSD product. Given the

variety of factors that can affect the use and performance of a 3M ITSD product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the 3M ITSD 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 the 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 negligence, warranty, or strict liability.



Industrial Adhesives and Aerospace Department Industrial Tape and Specialties Division

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