

3M

Bonding Films

For Electronics Assembly



*Reliable bond strength with
the die-cut precision of film and
the speed of hot melt adhesive*

Fast bonding, high-strength adhesive film for metal-to-plastic bonds

Benefits of film adhesive

- Controlled and consistent thickness
- Die-cut for precise fit, shape and size

Benefits of hot melt adhesive

- Bonds fast in 2-5 seconds with high strength
- Minimal oozing

3M™ Bonding Film attributes

- High adhesion to both metal and plastic substrates
- Flexibility to withstand shock
- Flows and compensates for substrate-to-substrate tolerance gaps
- Bonds narrow widths



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3M™ Bonding Films

Product	615		615S		620		668	
Key Features	Good adhesion to a variety of substrates		615 with non-woven carrier, exhibits minimal oozing		3 layer construction 615/PET (dielectric)/615		Slight tack, high temperature resistance	
Base Resin	PET		PET		PET		PET	
Color	Tan		Tan		Tan		Tan	
Bond Time (secs)	2-5		2-5		2-5		2-5	
Bondline Temp (°C)	138		138		138		160	
Film Thickness	mils	4	8	6	9	4	6	4
	mm	0.10	0.20	0.15	0.22	0.10	0.155	0.10
Tensile Strength/ Aluminum (PSI)	810		900		825		860	
180° Peel Strength (piw)	5 on Al		16 on Al		16 on SS		20 on SS	
2 lb. Dead Load Heat Resistance °C	102		102		102		127	

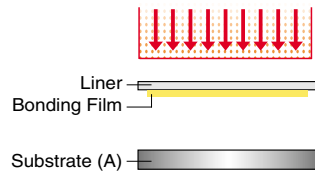
Converting Process



1 3M™ Bonding Film

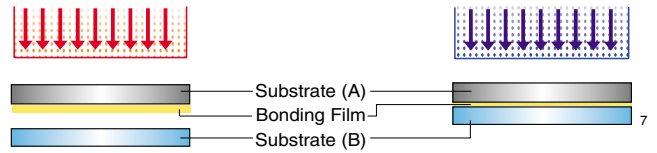
2 Slit into smaller rolls

3 Die-cut into desired shape



4 Pre-tacking

Temp: 60-120°C
Duration: 3-5 secs



5 Bonding

Temp: 100-180°C
Duration: 10-20 secs

6 Cooling down

Temp: Cool to 50°C
and below
Duration: 15-25 secs

Parameters are general guidelines only. Please consult your local 3M Technical Service Engineer.

3M™ Bonding Film quickly and securely bonds metal to plastic



Metal



3M™ Bonding Film

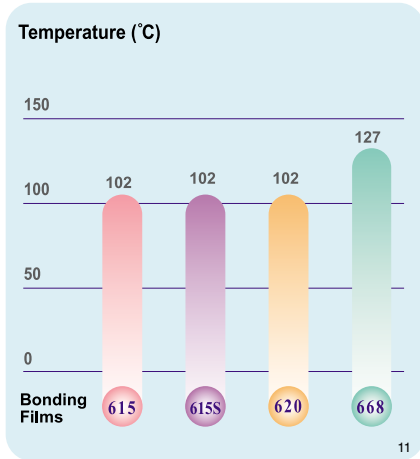


Plastic

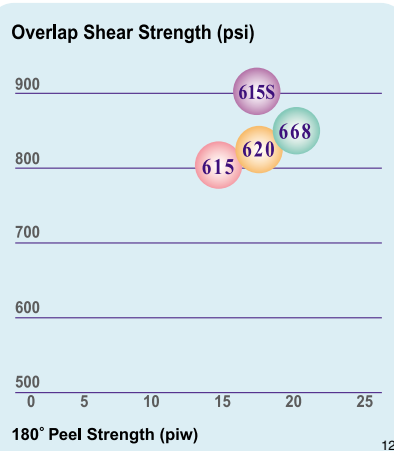


3M™ Bonding Films

2 lb. Deadload Heat Resistance



Relative Strength



Bonding Equipment



Controls pressure, temperature, and rates of bonding and cooling.

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