3M Industrial Adhesives and Tapes Technical Data Sheet

High Temperature Resistance Double Coated Tape (for Lead-free Solder Reflow Process) 9077 (Blue logo liner variant)

1. Description:

9077 is a double coated tape with non-woven backing that has excellent endurance for both of adhesive and release liner even after severe heat exposure. It can keep sufficient level of adhesion and liner release after lead free solder reflow process. This tape has excellent die-cut ability because tissue backing is used.

2. Construction:



High temperature resistant Acrylic adhesive /with high temperature resistant tissue backing

High temperature resistant paper liner

3. Key Features:

- Good adhesion to various substrates such as glass-epoxy, polyimide, Aluminum, Stainless steel, etc...
- Adhesion keeps sufficient level even after lead free solder reflow process
- Release line is easily releasable even after lead free solder reflow process
- This tape has excellent static shear holding power in high temperature conditions
- This tape offers good die-cut ability because of high temperature resistant non-woven backing compared to conventional high temperature resistant pressure sensitive tapes

4. General Properties:

	Таре	White Opaque
Color	Release Liner	White
		(with 3M logo printed in blue)
Thickness	Таре	50 um
	Release Liner	90 um
180 degree peel adhesion		11.0 N/cm

Test method

Thickness: Using thickness gauge with caliper foot of 5 mm diameter

180 degree peel adhesion: Support with 25 um PET film

Dwell: room temperature (23C) for 20-40min.

Peel angle: 180 degree, Peel speed: 300mm/min.



5. Liner Release Force after Reflow Process:

		Liner release force
90 Degree Liner Release	Before reflow (initial)	0.35
Force [N/cm]	After reflow	0.16

Test method

Reflow process: over 260 for 20 sec

Peel angle: 90 degree, Peel speed: 300mm/min.

6. 90 Degree Peel Adhesion to Various Substrates:

	Polyimide film	Glass epoxy
Before reflow	9.3	11.0
After reflow	5.1	9.1

Test method

Support film: 25um thick polyester film, Sample width: 25mm,

Pressure: 2kg rubber roller once for each direction

Dwell: room temperature (23C) for 20-40min. Peel speed: 300mm/min.

Reflow process: over 260 for 20 sec

7. Static Shear Holding Power, Slippage:

Temperature	Static shear slippage	
100 C	No slippage	
180 C	0.2 mm	

Test method

Support film: 25um thick polyester film, Sample area: 25x25 mm,

Substrate: SUS 304 BA

Dwell: 1 hour at each temperature

Measure the slippage distance after loading 1.5kg/area for 1 hour

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