

## Clean Removable Low-VOC Double Coated Tissue Tape 1110

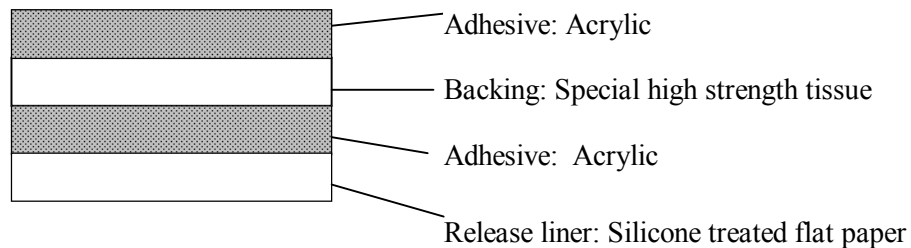
### 1. Description:

Cleanly removable low-VOC (Volatile Organic Compounds) double coated tape #1110 has special high strength tissue backing with acrylic adhesive on both sides. #1110 provides high adhesion to a wide variety of materials and it can be removed with minimum residuals on the substrate without tissue break after long term after bonding. 14 substances\*<sup>1</sup> specified by Health, Labor and Welfare Ministry in Japan are not intentionally used for the tape. The amount of VOCs\*<sup>2</sup> that causes sick house syndrome is very low from the tape.

\*1: Formaldehyde, Toluene, Xylene, Paradichlorobenzene, Ethyl benzene, Styrene, Chlorpyrifos, Di-n-butyl phthalate, Tetradecan, Nonanal, Di-2-ethylhexyl phthalate, Diazinon, Acetaldehyde, Fenobucarb, 14 substances.

\*2: object substance of above guideline

### 2. Structure:



### 3. Key Features:

- (1) Strong adhesion to various substrates
- (2) Clean removable from substrates without tissue backing break
- (3) Low amount of VOC evaporated from the tape

### 4. Applications:

- (1) Bonding of films or foams inside electronic devices
- (2) Decoration materials attachment for electric appliance
- (3) Metal or plastic nameplate attachment
- (4) Interior base sheet fixing for automotive
- (5) Cushion attachment for toys, musical instruments, leisure gears, etc.

### 5. General Properties:

Product name		1110
Color	Tape	Colorless opaque
	Liner	White (With "3M Low VOC" logo)
Thickness (mm)	Tape	0.150
	Liner	0.110
Tensile strength (N/cm)	Length direction	16.5
	Width direction	13.7
180 degree peel adhesion (N/cm)		8.2
Dynamic shear strength (N/c m <sup>2</sup> )		169.0

#### Test Method

Thickness: Using thickness gauge with caliper foot of 5mm diameter (JIS S 0237)

Tensile strength:

Distance between chucks: 100 mm, testing speed: 300 mm/min

180 degree peel adhesion:

To stainless steel (SUS 304 BA), support material: 0.025mm PET, lamination: 2 kg rubber roller once for each direction, dwell: 20-40 minutes at RT, testing speed: 300 mm/min

Dynamic Shear Strength:

To stainless steel (SUS 304 BA), lamination: 5 kg rubber roller once in each direction, dwell: 24 hours at RT, testing speed: 300 mm/min

### 6. 180 Degree Peel Adhesion to Various Substrates (N/cm):

Substrate	SUS 304 (BA)	PC/ABS	ABS	PC	Acrylic	PS	PP	PE
1110	8.2	8.0	7.8	9.6	8.6	7.2	5.5	3.6

#### Test Method

180 degree peel adhesion:

Support material: 0.025mm PET, lamination: 2 kg rubber roller once for each direction, dwell: 20-40 minutes at RT, testing speed: 300 mm/min

### 7. Dynamic Shear Strength at Various Temperatures:

Temperature	1110
5°C	301.9
23°C	169.0
50°C	124.3
75°C	53.1
100°C	26.0

(Unit: N/c m<sup>2</sup>)

#### Test Method

Dynamic Shear Strength:

To stainless steel (SUS 304 BA), lamination: 5 kg rubber roller once in each direction, dwell: 24 hours at RT, then condition at each temperature, testing speed: 300 mm/min

## 8. Static Shear Holding Power, Slippage:

	70°C
1110	0.8

(Unit: mm)

**Test Method**

Static Shear Holding Power, Slippage:

To stainless steel (SUS 304 BA), tape specimen size: 25x25mm, lamination: 2 kg rubber roller once in each direction, dwell: 1 hour at 70C, then load 500g weight and measure slippage distance after 5,000 minutes.

## 9. Adhesion Residue:

	Removability	Adhesive residue
SUS 304 (BA)	No break	No residue
PC/ABS	No break	No residue
ABS	No break	No residue
Acrylic	No break	No residue
PS	No break	No residue

**Test Method**

Laminate tape on to each substrate, supported with 0.050 mm tissue, lamination: 2 kg rubber roller once for each direction, aging: 65C x 95%RH for 100 hours, removal at RT, testing speed: 5 m/min, peel direction: 180 degree

## 10. VOC measurement:

Component	Guideline Value (ug/m <sup>3</sup> )	1110
Formaldehyde	100	2.8
Toluene	260	9.0
Xylenes	870	2.0
Paradichlorobenzene	240	<0.28
Ethyl benzene	3800	1.1
Styrene	220	<0.28
Tetradecane	330	<0.28
Nonanal	41(Tentative)	2.0
Acetaldehyde	48	<0.8
TVOC	400 (Tentative target)	162

**Test Method**JIS A 1901: 2003 Small Chamber method, measured on 7<sup>th</sup> day

\* Within 14 target substances of indoor concentration guideline by Health, Labour and Welfare Ministry, none of Chlorpyrifos, BPMC (termite poison), Di-n-butyl phthalate, Di-2-ethylhexyl phthalate (plasticizer), Diazine (herbicide) are used as materials for #1110.

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市内通話料金でご利用いただけます。

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**0120-282-369**

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