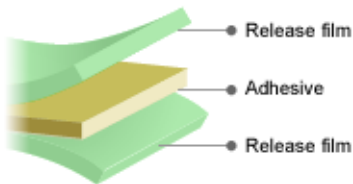


Thermal conductive adhesive transfer tapes UT6006W

Features

- Adhesive tape with lower environmental impact with UV curable manufacturing method (non solvent adhesive coating process).
- High heat resistance; can be used in environments of up to 120°C.
- High thermal conductivity.

Structure



Main component	Acrylic
Carrier	Non-carrier
Color	White
Adhesive thickness (μm)	About 60
Release film thickness (μm)	About 75 + 50
Bonding strength (N/20mm) *	3
St'd size (width & length)	480mm × 480mm

\* 90° peeling strength

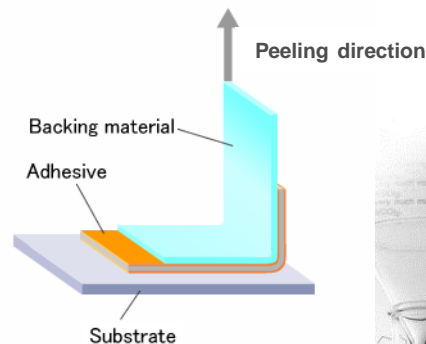
Suitable use

- Ideal for conducting heat from metals (aluminum and stainless) and plastics (ABS, PS and acrylic) of heat radiation units in electrical devices.

Technical data

1. Bonding strength on various type of substrate (90° peeling)

<Test piece condition>  
Tape width: 20mm  
Bonding condition: One stroke with 2-kg roller  
Measuring condition: 23°C±5°C 60%±20% RH  
Peeling speed: 300mm/min  
Backing material: 40μm Aluminum foil  
[Left at RT for one day before measurement]

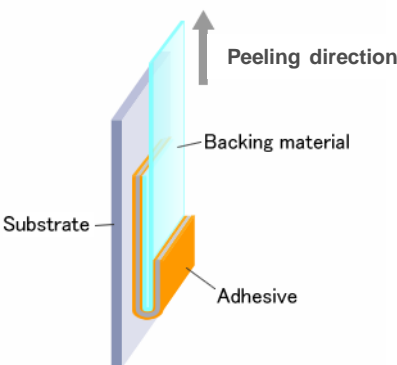


<90° peeling strength test>  
(N/20mm)

<Results>

Substrate	SUS	ABS	AL	PI
90° peeling strength	3.0	2.3	2.3	2.2

2. Bonding strength on various type of substrate (180° peeling)  
<Test piece condition>  
Tape width: 20mm  
Bonding condition: One stroke with 2-kg roller  
Measuring condition: 23°C±5°C 60%±20% RH  
Peeling speed: 300mm/min  
Backing material: 25µmPET  
[Left at RT for one hour before measurement]

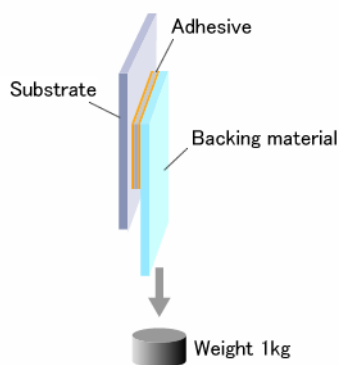


<Results> (N/20mm)

Substrate	SUS	ABS	AL	PI
180° peeling strength	3.1	1.1	0.8	1.3

<180° peeling strength test>

3. Holding power at different temperatures  
<Test piece condition>  
Substrate: Stainless steel plate (SUS304)  
Bonding area: 25mm × 25mm  
Bonding condition: One stroke with 2-kg roller  
Backing material: 40µm Aluminum foil  
[Left at RT for one hour and then at each temperature for 30 minutes before measurement]  
[Creep length after one hour application of 1-kg load]



<Results>

Measurement temperature	80°C	120°C
Creep length (mm)	0.1	0.2

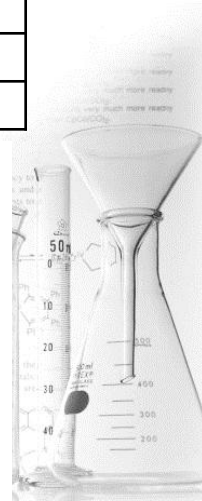
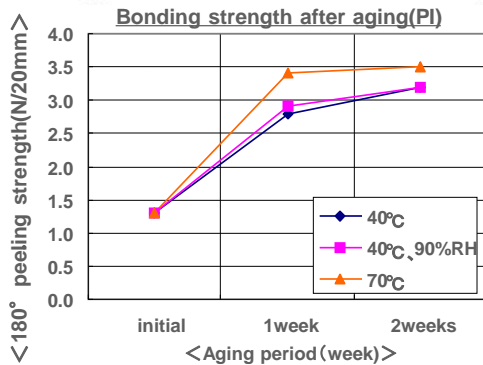
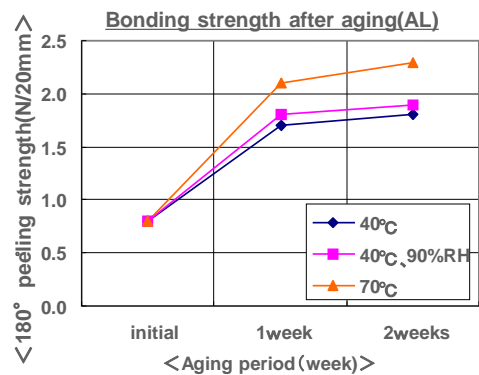
<Holding power test>

4. Reliability of bonding strength under different conditions (180° peeling)  
<Test piece condition>  
Substrate: Aluminum , Polyimide  
Tape width: 20mm  
Bonding condition: One stroke with 2-kg roller  
[Left at RT for one day and aged under each condition before measurement]

Peeling speed: 300mm/min  
Measuring condition: 23°C±5°C 60%±20%RH  
Backing material: 25µmPET

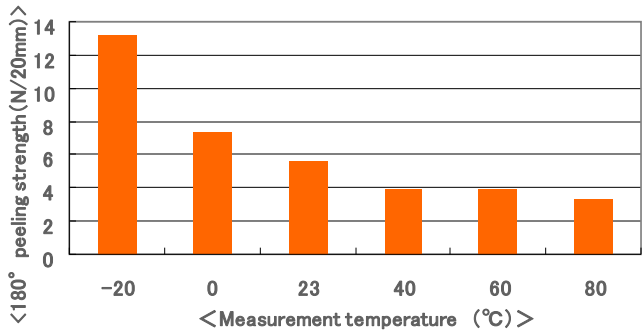
<Results> (N/20mm)

180° peeling strength			Initial	1 week	2 weeks
	AL	40°C	0.8	1.7	1.8
		40°C 90%RH		1.8	1.9
		70°C		2.1	2.3
	PI	40°C	1.3	2.8	3.2
		40°C 90%RH		2.9	3.2
		70°C		3.4	3.5



5. Bonding strength at different temperatures (180° peeling)

<Test piece condition>  
Substrate: Stainless steel plate (SUS304)  
Tape width: 20mm  
Bonding condition: One stroke with 2-kg roller  
Measuring condition: 23°C±5°C 60%±20%RH  
Peeling speed: 300mm/min  
Backing material: 25µmPET  
[Left at RT for one hour and then at each temperature for 30 minutes before measurement]

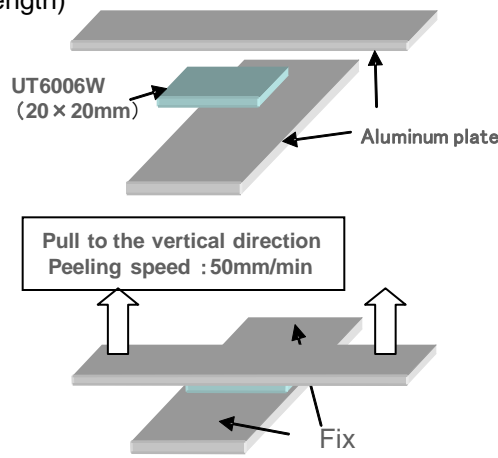


<Results> (N/20mm)

Measurement temperature	-20	0	23	40	60	80
180° peeling strength	13.2	7.4	5.59	3.96	3.97	3.28

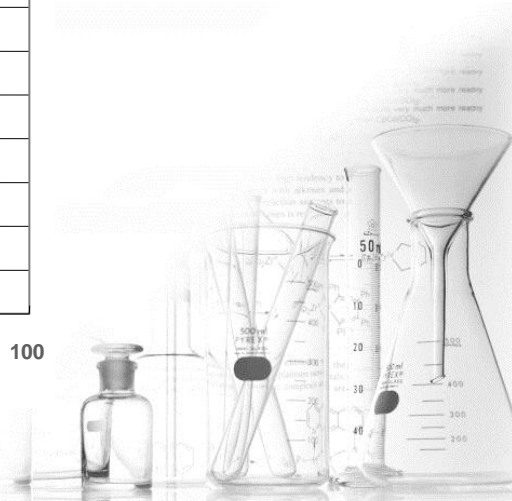
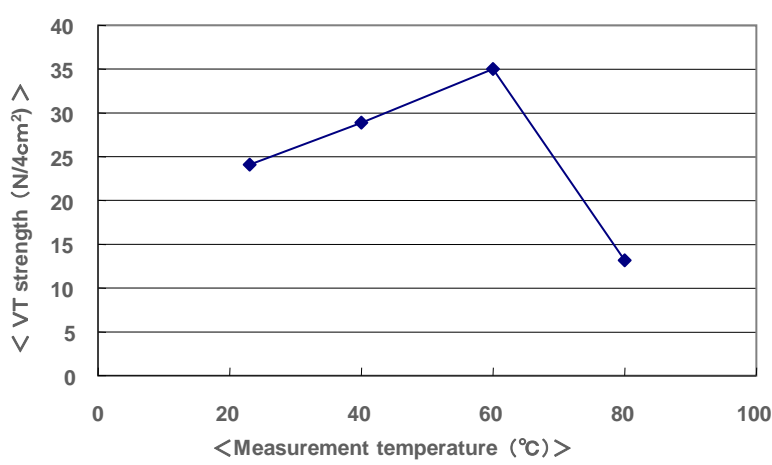
6. Bonding strength at different temperatures (Vertical tensile strength)

<Test piece condition>  
Bonding area: 20mm × 20mm  
Substrate: Aluminum plate  
Bonding condition: Normal temperature press 294.3kPa × 10sec  
Peeling speed: 50mm/min  
[Left at RT for one day and then at each temperature for 30 minutes before measurement]



<Results> <Vertical tensile strength test>

Measurement temperature (°C)	23	40	60	80
Vertical tensile strength (N/4cm²)	24.1	28.2	35.0	13.1



#### Measurement method of surface resistance

### 7. Electrical property 1 (surface resistance)

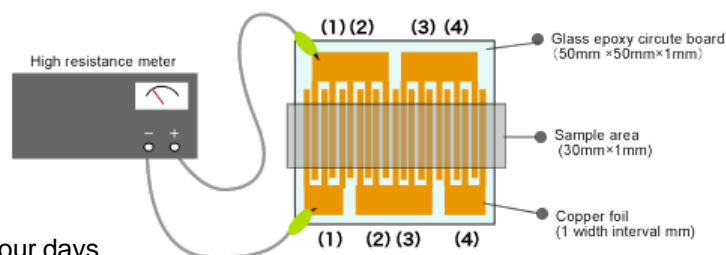
#### <Test piece condition>

Measurement voltage: 500V

Charging time: 60sec

[Initial: Left at RT (23°C 65%RH) for one day before measurement]

[Moisture resistance: Left at 60°C 95%RH for four days before measurement]



#### <Results>

		Initial	Moisture resistance
Surface resistance (Ω)	(1)	$5.8 \times 10^{12}$	$3.4 \times 10^9$
	(2)	$2.5 \times 10^{12}$	$8.2 \times 10^9$
	(3)	$2.1 \times 10^{12}$	$13 \times 10^{10}$
	(4)	$3.6 \times 10^{13}$	$8.5 \times 10^{10}$

#### Measurement method of Dielectric breakdown voltage and Withstand voltage

### 8. Electrical property 2

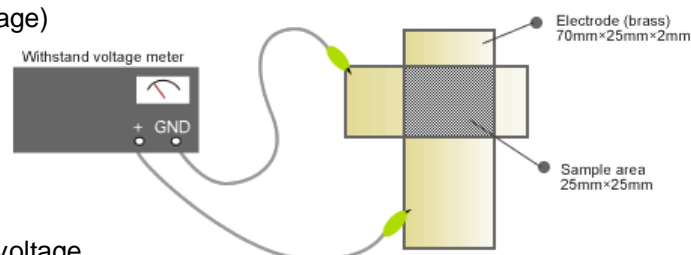
(dielectric breakdown voltage, withstand voltage)

#### <Test piece condition>

Setting electric current: 0.5mA

Voltage climb rate: About 0.1kV/sec  
(manual operation)

Judgment: The voltage value which maintains insulation for one minute was set to withstand voltage.



#### <Results>

Dielectric breakdown voltage Measurement value (kV)	2.4	Withstand voltage Measurement value (kV)	1.8
Dielectric breakdown voltage (kV/mm)	40.0	Withstand voltage (kV/mm)	30.0

### 9. Heat resistance: Measured by our self-made heat resistance meter

#### <Test piece condition>

Tape size: 20mm x 20mm

Setting electric power of heater: 10W

Pressure: 0.197MPa

[Left at RT for 30 minutes or more and measure heat resistance]

#### <Results>

Heat resistance (°C/W)	0.58
Thermal conductivity (W/(m·K)) *2	0.53

#### \*2 Calculation from data of Heat resistance

Note on the characteristic data given—Data on the characteristics of the products described in this catalog are based on the results of evaluations carried out by the company. This does not guarantee that the characteristics of the product conform with your usage environment. Before use, review the usage conditions based on evaluation data obtained from the equipment and substrates actually used.

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