NITTO DENKO
PRODUCT INFORMATION
Ref. No.

Double-Coated Adhesive Tape No.501K

1. Outline

Nitto Denko's Double-Coated Adhesive Tape No.501K is made by impregnating flexible non-woven fabric with our pressure-sensitive adhesive which has powerful initial adhesion. Not to mention metal and plastic, the tape bonds well to rough surface objects such as fabric, synthetic leather and wood.

2. Construction

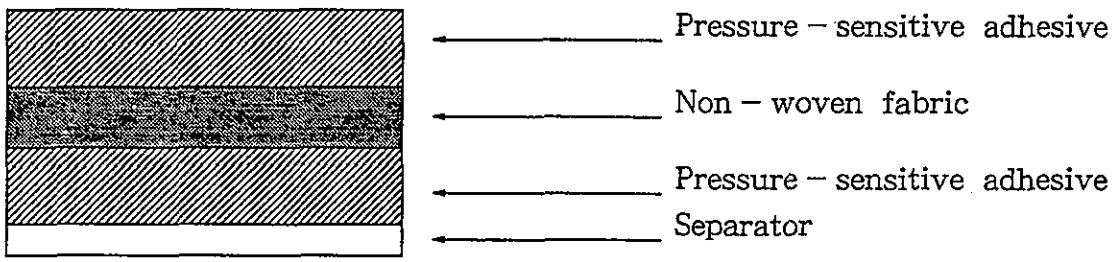

Figure 1

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3. Features

(1) Strong initial adhesion.

(2) Powerful peel strength.

(3) Good durability

4. Uses

(1) Temporarily fixing of leather parts in sewing leather products.

(2) Temporarily fixing of handicrafts.

(3) Splicing of paper and film

(4) Other general uses

5. Standard Sizes

Table 1

Thickness of Tape (mm)	Thickness of Separator (mm)	Standard width (mm)	Length (m)
0.17	0.07	3, 5, 7, 10, 15, 20, 25, 30, 50, 100, 400	20, 50

* For other sizes, please contact us.

6. Properties

6.1 Adhesion to various types of adherend

(1) Test method : 180° peeling method (JIS – Z – 1528)

(2) Peeling rate : 300 mm/min.

(3) Measuring temperature : 20 ℃

Table 2

(Unit : g/20 mm)

Adherend		Measurement
Stainless Steel Plate		1090
Aluminum Plate		1000
Glass Plate		1300
ABS Plate		1100
Polypropylene Plate		750
Veneer Plate		850
Corrugated Cardboard Plate		400
Urethane Foam	Ester	110
	Ether	70
Polyethylene Foam (expansion ratio : 30)		500
Real Leather	Grain side	800
	Back side	450
Synthetic Leather	Grain side	750
	Back side	600

6.2 Changes in Adhesion with Temperature

(1) Test Method : 180° peeling method

(2) Adherend : Stainless Steel Plate (conforming to JIS－Z－1528－6－7－2)

(3) Peeling rate : 300 mm／min.

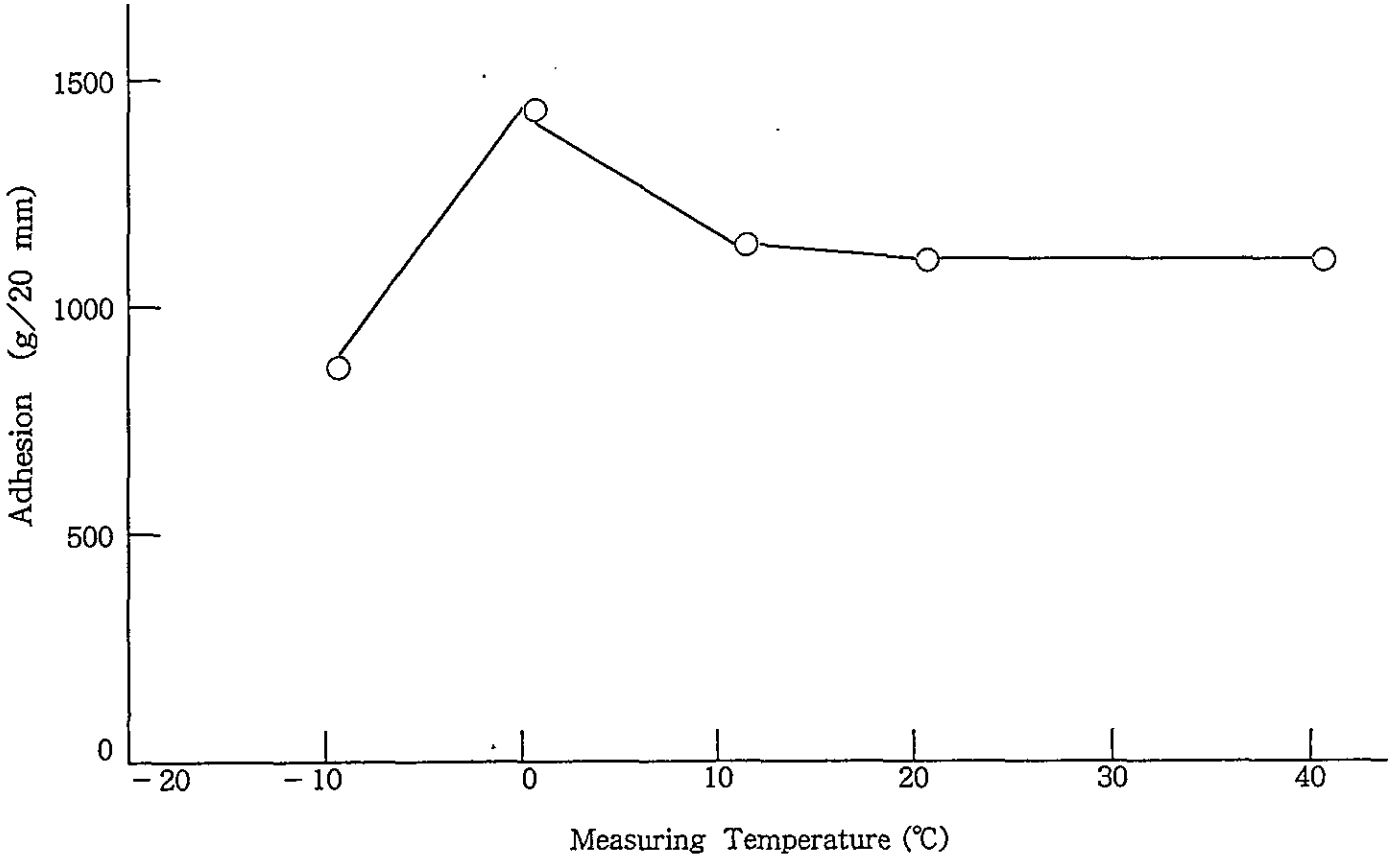

Figure 2 : Changes in Adhesion with Temperature

6.3 Changes in Shear Strength with Temperature

(1) Test method : Shear strength

(2) Adherend : Stainless steel plate (conforming to JIS－Z－1528－6－7－2.)

(3) Application Temperature : 20 ℃

(4) Peeling rate : 200 mm／min

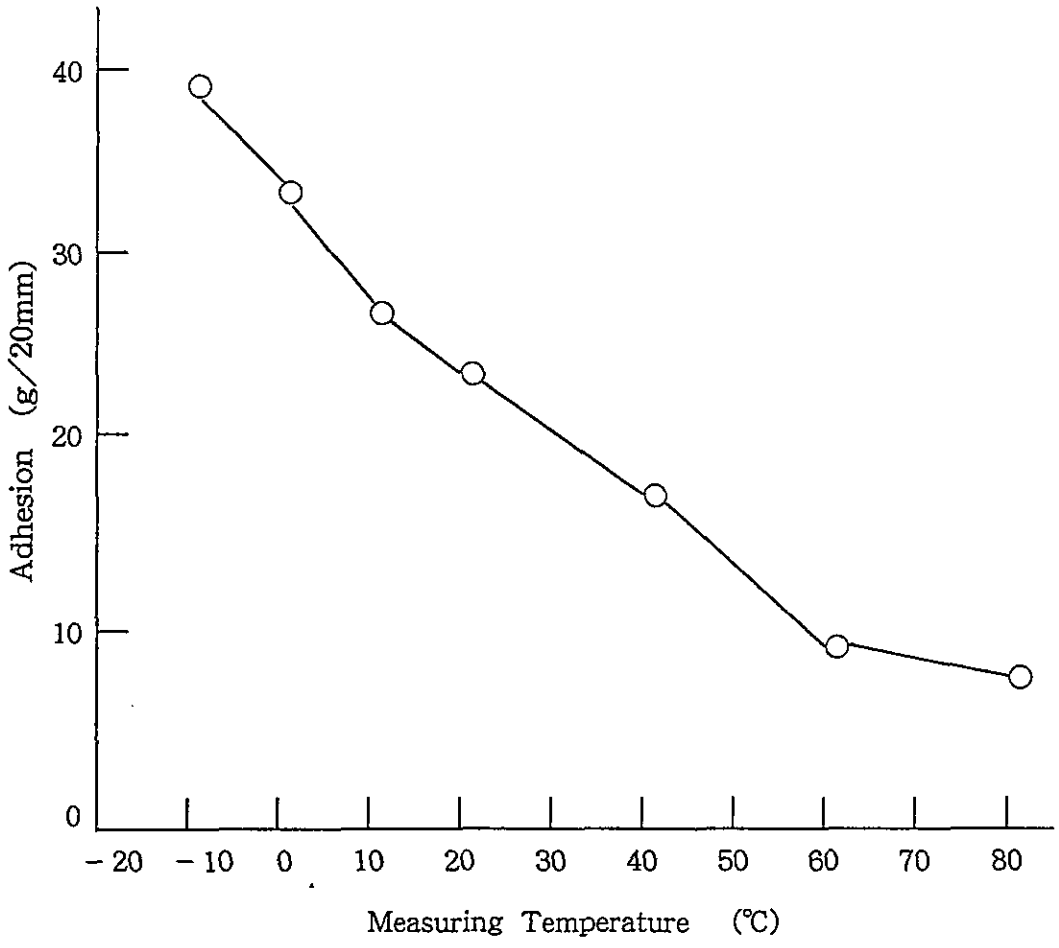

Figure 3 : Changes in Shear Strength with Temperature

6.4 Initial Adhesion

(1) Testing method : Probe tack (ASTM – D2979)

(2) Adherend : Stainless steel (ϕ 5 mm)

(3) Time for application by pressing, pressure : 0.1 second, 25 g

(4) Pulling rate : 100 mm/sec.

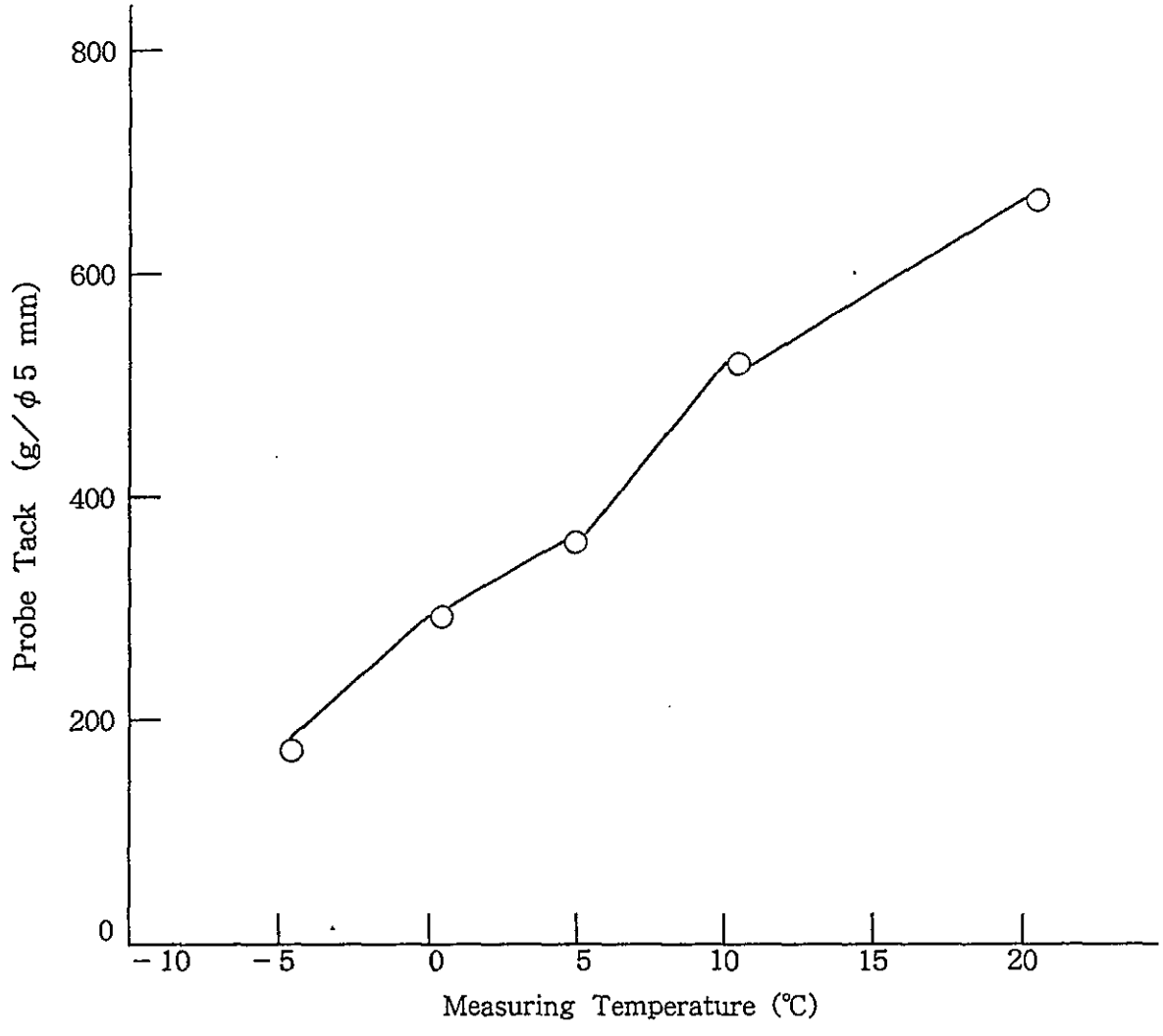

Figure 4 : Initial Adhesion

6.5 Repulsion Resistance

(1) Testing method : Repulsion resistance of bent part

(2) Adherend : 0.27 mm ARS sheet + alminum plate

(3) Measuring temperatures :

Temperature condition A :

After applied tape is left at 20 ℃ for 24 hours, ABS sheet is checked for lifting.

Temperature condition B :

At first, applied tape is left at − 10 ℃ and then temperature is raised gradually up to 60 ℃. After 10 cycles of the said temperature changing, ABS sheet is checked for lifting.

(4) Measuring mehtod : As shown in Figure 5, strips of applied tape with bent parts of different lengths are left under each temperature condition.(Condition A or B.) After that, ABS sheet is checked for lifting.

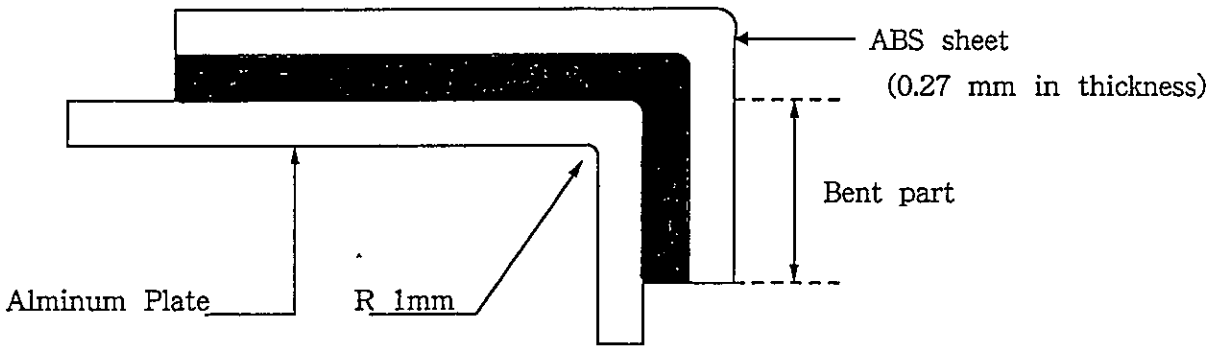

Figure 5 : Method of Testing Repulsion Resistance

Table 3

Temperature Conditions	Length of bent parts (mm)	Measurements
After left at 20 ℃ for 24 hours	5	△
	10	○
	15	○
After 10 cycles of being left at temperatures from −10 to 60 ℃	5	×
	10	△
	15	○

○ : No lifting
△ : Slight lifting
× : Apparent lifting

6.6 Durability

(1) Testing method : Changes in shear strength with time (days)

(2) Adherend : Alminum plate

(3) Measuring temperature : 20 ℃

(4) Pulling rate : 10 mm/min

(5) Conditions for applied tape to be left : 40 ℃x92% RH, 80 ℃

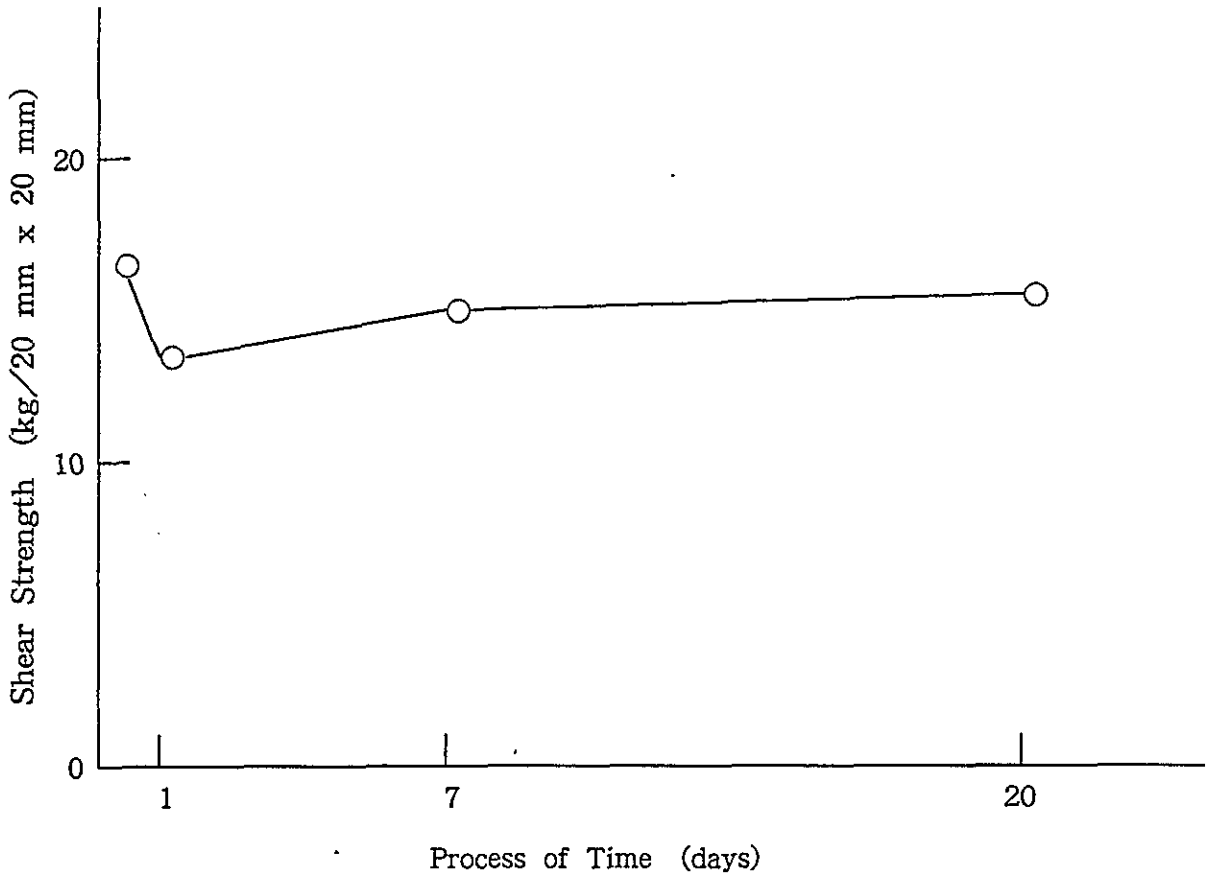

Figure 6 : Shear Strength (after left at 40 ℃ in 92% RH)

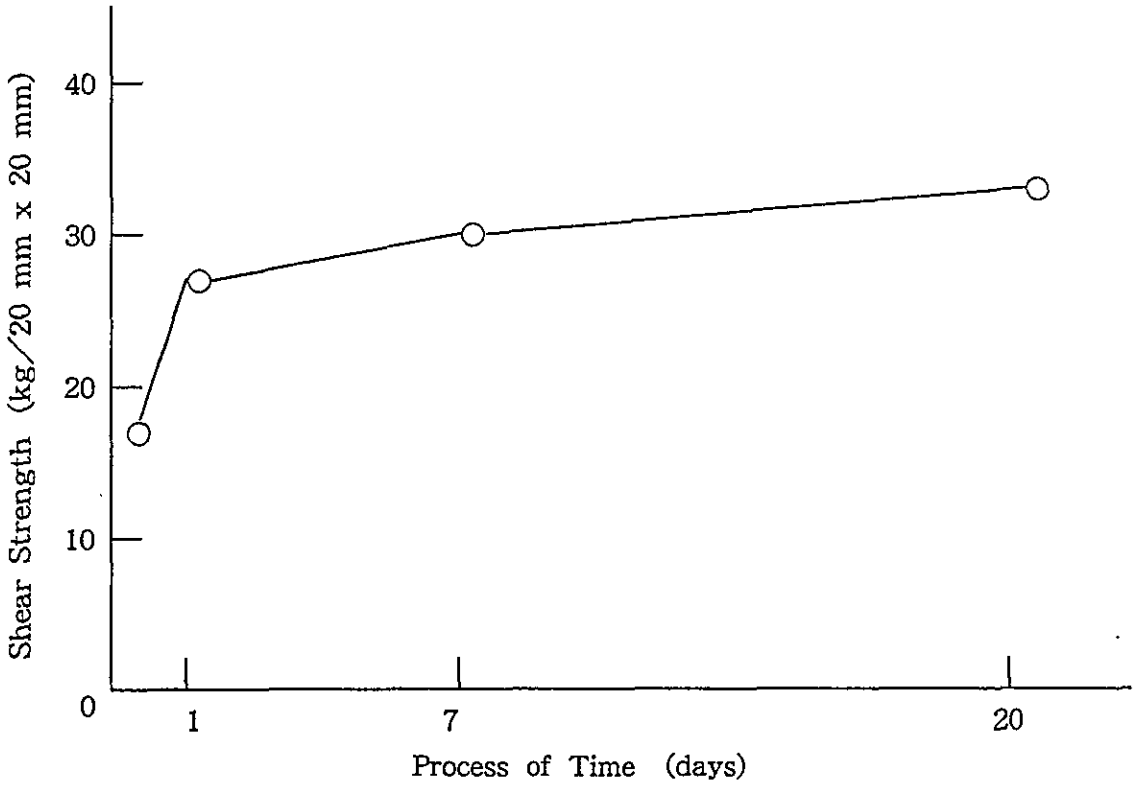

Figure 7 : Shear Strength (after left at 80 ℃)

6.7 Shelf Stability

(1) Testing method : 180° peel strength

(2) Adherend : Stainless steel plate (conforming to JIS－Z－1528－6－7－2)

(3) Measuring temperature : 20 ℃

(4) Peeling rate : 300 mm／min

(5) Conditions for storage : Tape No.510K stored under three different conditions shown in Figure 8 is taken out and 180° peel strength is checked.

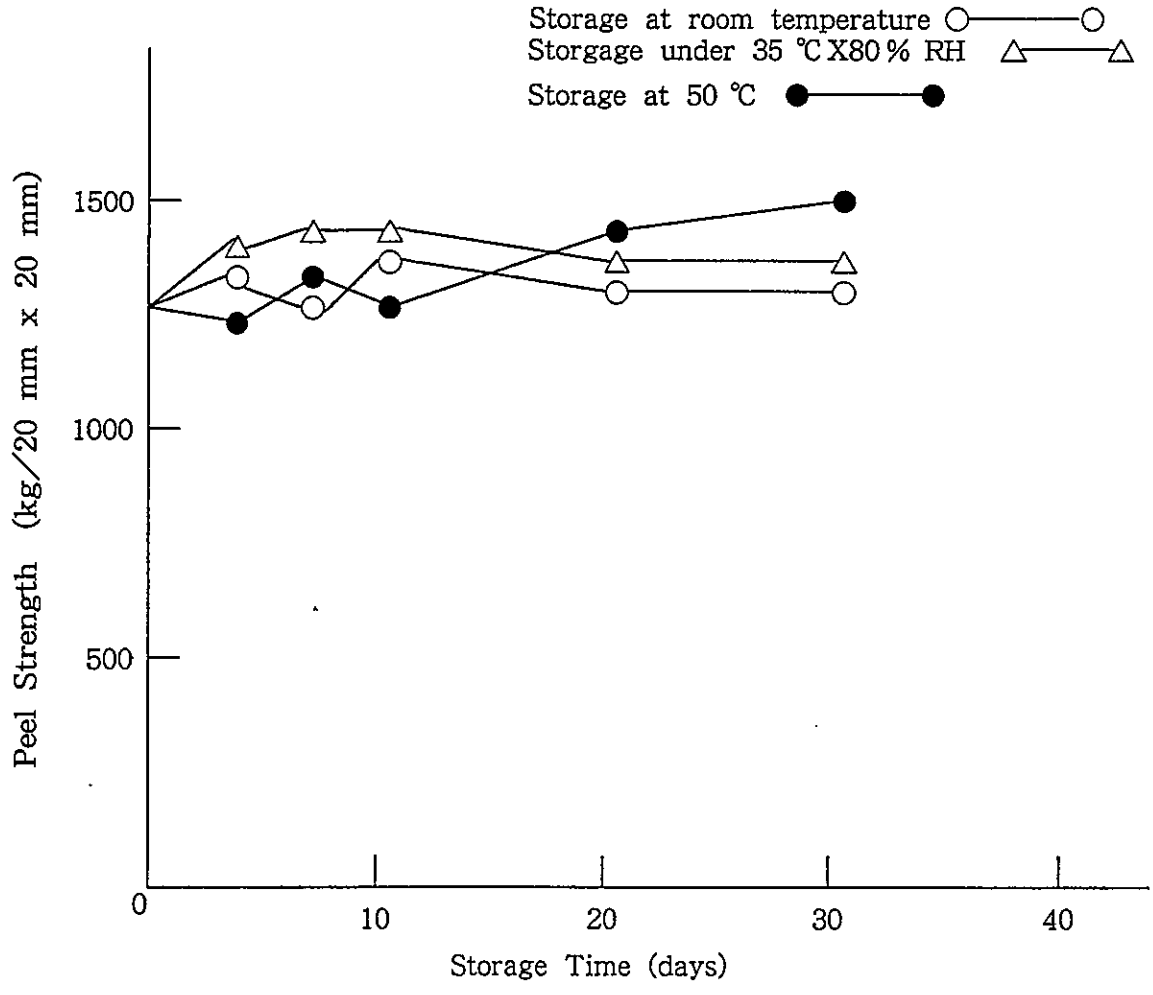

Figure 8 : Adhesion after Storage

7. Precautions for uses

(1) Remove oil, moisture or dust from surface of adherend.

(2) Smooth rough surface as much as possible.

(3) As pressure－sensitive adhesive is used, apply enough pressure to ensure proper contact between adhesive tape and adherend.

(4) It will take a llittle time until the adhesion reaches the designed level. Unlike glue application, fixing using tools is not required. However, within several hours of time after application, prevent applied tape from being affected by undue force.

(5) Optimum application temperature is between 10～30 ℃.

8. Precautions for Storage

(1) Please be sure to store the tape in a box. The storage box should be placed so that the side of tape is upward.

(2) Please store the tape in a cool and dark place away from direct sunlight.

9. Others

Technical data figures presented herein are typical and should not be used for any specification purposes.