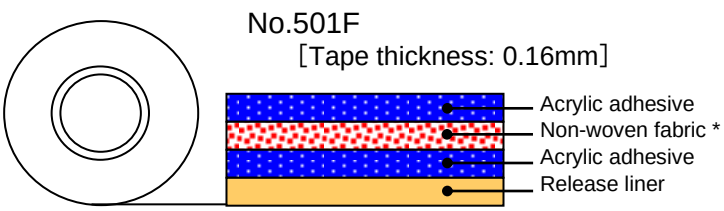
Double-coated adhesive tape

No.501F

Outline

Nitto No.501F is a double-coated adhesive tape consisting acrylic adhesive with Non-woven fabrics carrier. The tape adheres well widely in general fixing such as papers or films.

Structure



* "Non-woven fabric" is classified under a law called Customs Act of Fixed Rate Chapter 48 "Paper and paperboard; articles of paper pulp, of paper or of paperboard".

Features

- Adheres well to various types of substrates.
- Moderate adhesive offers easy to use.
- The ten hazardous materials restricted by the RoHS directive are not compounded.

Applications

- General bonding.
- Splicing of papers and films.
- Fixing of plastic signs.
- Temporary fixing.

Sizes

Tape thickness (mm)	Width (mm)	Standard length (m)
0.16	3-1200	20 , 50

For details, please contact us.

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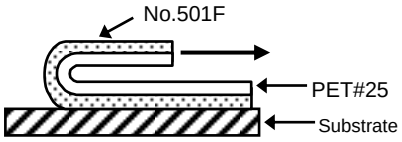
Properties

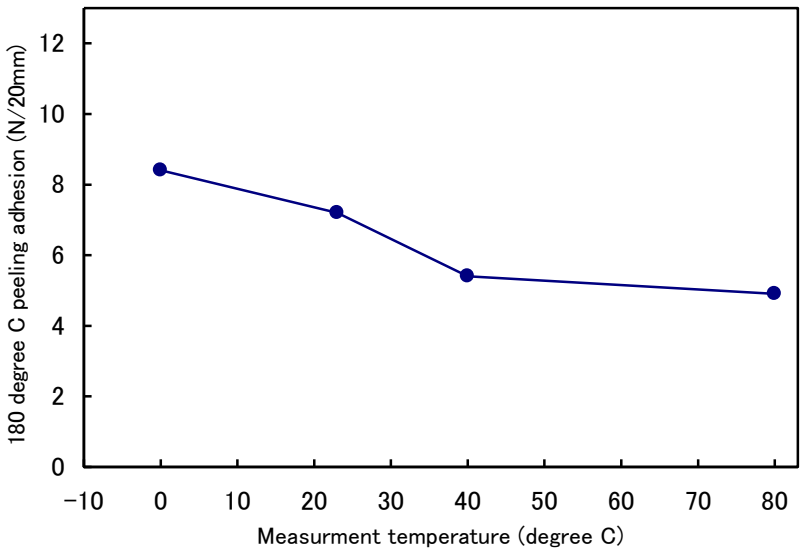
●180 degree peeling strength for each substrate

Substrate	No.501F
Stainless steel plate	7.2
Aluminum plate	6.8
ABS plate	6.0
Acrylic plate	9.8
PCABS plate	9.8
Polypropylene plate	4.3
PS t plate	9.3
PC plate	8.6
Veneer plate	6.5
Glass plate	4.4
Polyester plate	6.5
Polyacetal plate	3.3
File paper	7.3

(Unit: N/20 mm)
Tape area: 20mm width
Lining material: PET#25
Pressing condition: 1 pass back and forth with a 2-kg roller at 23 degree C, 50%RH
Applying condition: 23 degree C, 50%RH x 30min
Peeling speed: 300 mm/min
Peeling angle: 180 degree
Measurement temperature: 23 degree C, 50%RH



●Change in adhesive strength according to temperature



(Unit: N/20 mm)
Tape area: 20mm width
Peeling angle: 180 degree
Applying condition:23 degree Cx50%RH
Peeling speed: 300 mm/min

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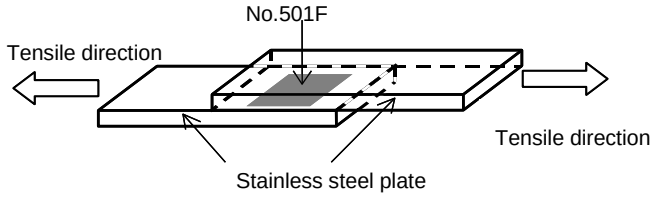
Properties

● Shear strength

Substrate	No.501F
Stainless steel plate / Stainless steel plate	55

(Unit: N/ cm2)
Tape area: 20mm x 20mm
Substrate: stainless steel plate/ stainless steel plate
Peeling speed: 50mm/min
Measurement method:
Substrates are laminated by No.501F(20x20mm) and measured the force of breakdown.



●180 degree peeling adhesion after laminating - Increasing

Aging	No.501F
1 min later	5.8
30 min later	7.2
24 hrs later	9.8
48 hrs later	11.3
72 hrs later	12.3
168 hrs later	13.1

(Unit :N/20mm)
Substrate: Stainless steel plate
Tape area: 20mm width
Lining material: PET #25
Pressing condition:
1 pass back and forth with 2-kg roller at 23 degree C, 50%RH
Applying Condition: 23 degree C/50%RH x 1min, 30min, 24hrs, 48hrs, 72hrs and 168hrs
Peeling speed: 300mm/min
Peeling angle: 180 degree
Measurement temperature: 23 degree C/50%RH

●180 degree peeling strength for each application pressure

Application	No.501F
0.1 kg roller	6.5
0.5 kg roller	6.8
2 kg roller	7.2
5 kg roller	9.2

(Unit: N/20 mm)
Substrate: Stainless steel plate
Lining material: PET#25
Pressing condition:
1 pass back and forth with 0.1kg, 0.5kg, 2kg and 5kg at 23 degree C/50%RH
Applying condition: Each temperature for x 30min
Peeling speed: 300 mm/min
Peeling angle: 180 degree
Measurement temperature: 23 degree C/50%RH

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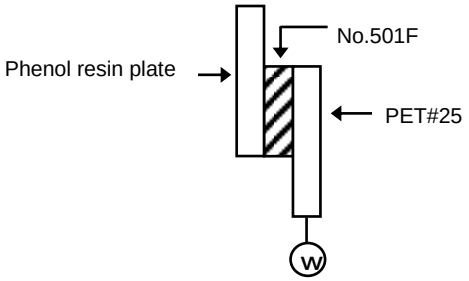
Properties

●Holding power

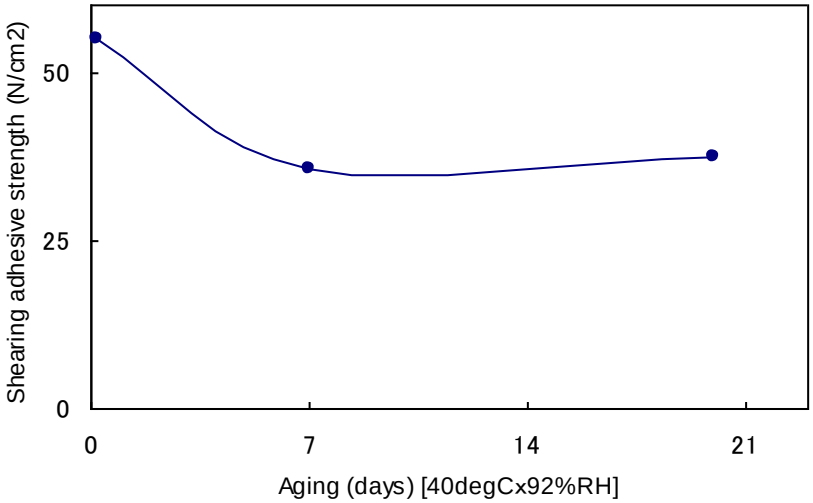
Measurement temperature	No.501F
40 degree C	0.3



(Unit :mm)
Measurement temperature: 40 degree C
Measurement method:
Phenol resin plate and PET#25 are laminated by NO.501F (10x20mm) and loaded (4.90N).
Measure the shear after 1 hour.

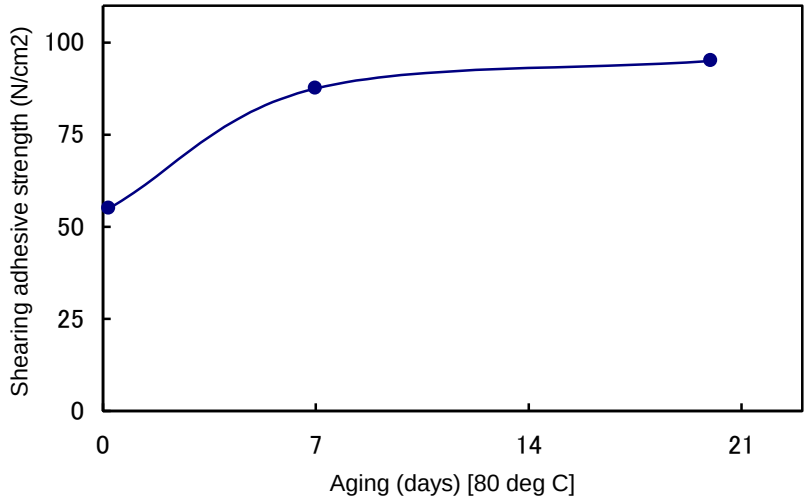
●Shearing adhesive strength -Aging(durability) at each condition after applying

(1) 40 degree C x 92%RH



Test method: Shearing adhesive strength
Substrate: Aluminum plate
Measurement temperature:
23 degree C x 50%RH
Peeling speed: 50mm/min
Aging condition: 40 degree C x 92%RH

(2) 80 degree C



Test method: Shearing adhesive strength
Substrate: Aluminum plate
Measurement temperature:
23 degree C x 50%RH
Peeling speed: 50mm/min
Aging condition: 80 degree C

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Properties

●180 degree peeling adhesion -Aging(durability) at each condition after applying

Condition		No.501K
Initial (23 degree C/50%RH x30min)		7.2
-20 degree C x 30 days		8.8
80 degree C	1 day	13.3
	7 days	12.4
	14 days	11.9
	30 days	11.7
40 degree C 92%RH	14 days	14.7
	30 days	13.8
60 degree C/90%RH x 30days		13.3

(Unit: N/20 mm)
Substrate: Stainless steel plate
Lining material: PET#25
Pressing condition:
1 pass back and forth with 2-kg roller
at 23 degree C/50%RH
Applying condition: Refer to the left fig.
Peeling speed: 300 mm/min
Peeling angle: 180 degree
Measurement temperature: 23 degree C/50%RH

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Precautions when using

- ●Remove all oil, moisture and dirt from the surface of the substrate before applying.
- ●Since the tape is pressure-sensitive adhesive, be sure to apply enough pressure with a roller or press when applying. Otherwise it might be affected to its properties and appearance.
- ●The tape may not adhere well to extremely uneven or distorted surfaces. Enough Leveling off the surface should be required before applying.
- ●It takes certain time to get full adhesive strength after applying, keep away the tape from any stress for a several hours after applying.

Precautions when storing

- ●Please be sure to keep the tape in its box when not using.
- ●Please keep in a cool and dark place away from direct sunlight.

Safety precautions

⚠ WARNING
●Make sure the product is suitable for the application (objective and conditions) before attempting to use. The tape may come off depending on the substrate to which it is applied or conditions under which it is applied.
●Use in combination with another method of joining if there is possibility of an accident.

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