

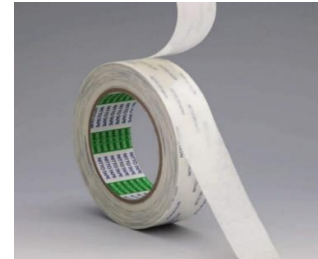
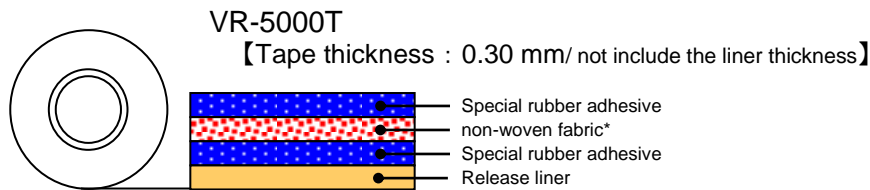
Superior adhesive performance Double-coated adhesive tape

VR-5000T

Outline

Nitto VR-5000T is a double-coated adhesive tape consisting of the special rubber adhesive. This tape offers excellent adhesive strength for a wide variety of substrates, and superior resistance to repulsion force for metals and plastic parts. This tape can be applicable to various rubbers and foams, too. VR-5000T is good performance for rough surface because of its thickness.

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".

Feature

- Offers excellent adhesion for Metal plate, plastic plate (PP, PE, etc.), rubber plate, foam by using the special rubber adhesive.
- Offers superior repulsion property.
- VR-5000T is good performance for rough surface because of its thickness.
- Ten restricted substances by RoHS2 are not contained.

Application

- Bonding of metals plates, plastic plates, rubbers and foams.
- Bonding of parts in:
Printers, Copiers, Televisions, Other office equipment and Home appliances.

Size

Tape thickness(mm)	Width(mm)	Length(M)
0.30	5~1,050	50

For more information, please contact us.

VR-5000T 10-P-0453_E (1/6)

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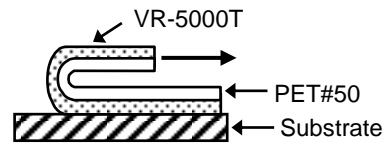
Properties

●180 degree peeling adhesion for each substrate

Substrate	VR-5000T
Stainless steel plate	50
Aluminum plate	47
Glass plate	50
ABS plate	40
PCABS plate	42
Polystyrene plate	50
HIPS plate	50
Polycarbonate plate	50
Polypropylene plate	40
POM plate	40
Polyethylene plate	33
EPT rubber	25

(Unit : N/20mm)

Tape size : 20mm width
 Backing material : PET#50
 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 : 300mm/min
 Peeling angle : 180 degree
 Measurement temp : 23 degree C, 50%RH



●180 degree peeling adhesive strength for each temperature

Temperature	VR-5000T
0 degree C	47
23 degree C	50
40 degree C	48
60 degree C	40

(Unit: N/20mm)

Substrate : Stainless steel plate
 Tape size : 20mm width
 Backing material : PET#50
 Pressing condition :
 1 pass back and forth with a 2 kg roller
 Bonding temperature : 23degreeC/50%RH
 Curing condition :
 Measurement temperature x 30 min
 Peeling speed : 300 mm/min
 Peeling angle : 180 degree
 Measurement temperature : 0, 23, 40, 60 degree C

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●180 degree peeling strength - Aging after application

Aging after application	VR-5000T
1 min later	45
30 min (Initial) later	50
24 hours later	53
48 hours later	55
72 hours later	55
168 hours later	55

(Unit: N/20mm)

Substrate : Stainless steel plate
 Tape size : 20mm width
 Backing material : PET#50
 Pressing condition :
 1 pass back and forth with a 2 kg roller
 Bonding temperature: 23degreeC/50%RH
 Curing condition : 23degreeC/50%RHx
 1min, 30min, 24hr, 48hrs, 72hrs, 168hrs
 Peeling speed : 300 mm/min
 Peeling angle : 180 degree
 Measurement temperature : 23degreeC/50%RH

●180° peeling strength for each application pressure

Application	VR-5000T
0.1 kg roller	35
0.5 kg roller	46
2 kg roller	50
5 kg roller	52

(Unit: N/20mm)

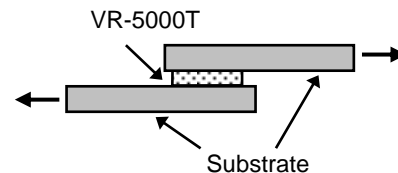
Substrate : Stainless steel plate
 Tape size : 20mm width
 Backing material : PET#50
 Pressing condition :
 1 pass back and forth with a 0.1 kg, 0.5 kg, 2 kg, 5 kg roller,
 Bonding temperature : 23degreeC/50%RH
 Curing condition : 23degreeC/50%RH x 30 min
 Peeling speed : 300 mm/min
 Peeling angle : 180degree
 Measurement temperature : 23degreeC/50%RH

●Shearing adhesive strength for each substrate

Substrate	VR-5000T
Stainless steel plate	650
Aluminum plate	470
ABS plate	350
Polystyrene plate	350
Polycarbonate plate	380

(Unit : N/20mm×20mm)

Tape area : 20mm×20mm
 Pressing condition : 1 pass back and forth with 5 kg at
 23 degree C/50%RH
 Applying condition : 23 degree C/50%RH×30min
 Peeling speed : 50mm/min
 Measurement temp : 23 degree C/50%RH



VR-5000T 10-P-0453_E (3/6)

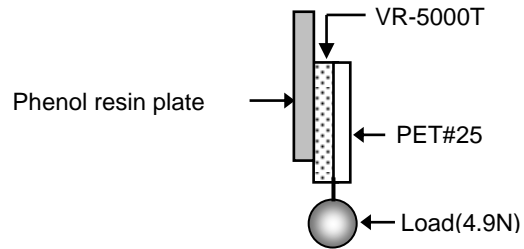
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● Holding power

Temperature	VR-5000T
23 degree C	0.1
40 degree C	0.2
60 degree C	0.2

(Unit : mm/hr)

Substrate : Phenol resin plate
 Backing material : PET#25
 Pressing condition : 1 pass back and forth with
 2 kg at 23 degree C/50%RH
 Applying condition : 23 degree C/50%RH×30min
 Tape area : 20mm×10mm
 Load : 4.9N(500gf)
 Load time : 1hr

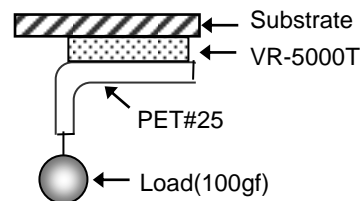


● Static load peeling

Substrate	VR-5000T
Stainless steel plate	0.8
ABS plate	0.8
Polystyrene plate	1.0
Polypropylene plate	0.8

(Unit : mm)

Tape area : 10mm×50mm
 Backing 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×30min
 Load : 0.98N(100gf)
 Application temp : 23 degree C/50%RH
 Load time : 24hrs



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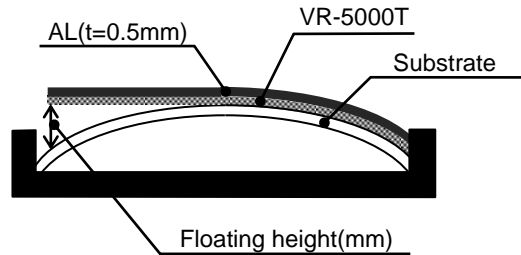
● Resistance to repulsion for plastic plate

Substrate	VR-5000T
ABS plate	< 1
Polypropylene plate	< 1
Polystyrene plate	< 1

(Unit : mm)

Tape area : 20mm×180mm
 Substrate size : 30mm×200mm
 Backing material : AL (t=0.5mm)
 Pressing condition : 23 degree C/50%RH
 Applying condition : 23 degree C/50%RH for 24 hrs
 Repulsion condition :

Laminate a substrate and AL plate with tape by laminating machine. Fit the left sample into wooden mold then leave it at 70 degree C x 72 hrs and measure the floating height.



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

Condition	VR-5000T	
Initial(23 degree C/50%RH×30min)	50	
-30 degree C×30 days	60	
80 degree C	14 days	65
	30 days	65
40 degree C/92%RH×30 days	66	
60 degree C/95%RH×30 days	67	
Heat shock[100cycle] ^{*1}	65	
Heat cycle[40cycle] ^{*2}	64	

(Unit : N/20mm)

Substrate : Stainless plate
 Tape size : 20mm width
 Backing material : PET#50
 Pressing condition : 1 pass back and forth with 2 kg roller at 23 degree C/50%RH
 Applying condition : Refer to the left table
 Peeling speed : 300mm/min
 Peeling angle : 180 degree
 Measurement temperature : 23 degree C/50%RH

*1 : Heat shock condition
 [-40 degree C x 30min ⇄ 90 degree C x 30min]
 100cycle

*2 : Heat cycle condition
 [-20 degree C x 6hr ⇒ (1hr) ⇒ 60 degree C/95%RH x 6hr ⇒ (1hr) ⇒]
 40cycle

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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.
- Depending on a rubber material, there may be a risk of affecting adhesive property over time due to migration of component from rubber material. Please conduct a thorough evaluation in advance, on initial adhesive strength and its change over time.
- This product uses a rubber adhesive, which is easily affected by heat and oxygen compared to acrylic adhesive. Please conduct a thorough evaluation in advance on initial adhesive properties and its change over time, to determine application area and usage.

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
<ul style="list-style-type: none">● 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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