Double-coated adhesive tape

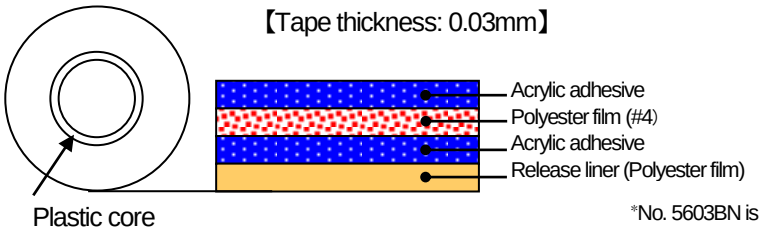
No.5603, No.5603BN

Outline

Nitto Denko No. 5603 and No. 5603BN are 0.03mm thickness double-coated adhesive tapes. The tapes have a #4 polyester film as a base coated on both sides with acrylic adhesive, and offer superior bonding to plastic films and moldings. A mere 0.03-mm thick, the tape facilitates thinner electronic equipment. The double-coated adhesive tapes also offer superior adhesion to rough surfaces.

Structure

No.5603, No.5603BN*
【Tape thickness: 0.03mm】



*No. 5603BN is the black version of No. 5603.
Uses black polyester film.

Features

- Tape thickness is 0.03 mm. Can be used for bonding in limited spaces or clearances.
- Uses thin #4 polyester film for superior conversion prior to use.
- Offers strong bonding to PC housing, optical waveguide plates and reflective sheets used for LCD backlight modules.
- Halogen-free type. (We do not use chloride compounds on purpose for this product.)
- The ten hazardous materials restricted by the RoHS directive are not compounded.

Applications

- Fixing of reflective sheets used for LCD backlight modules for digital cameras and cellular telephones.
- Fixing of parts for compact home appliances

Standards Size

Tape thickness (mm)	Widths (mm)	Length (m)
0.03	16~500	100

For more information, please contact us.

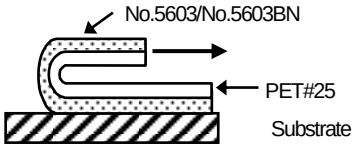
Properties

●180° peeling adhesion by substrate

Substrate	No.5603, No.5603BN
ABS plate	8.7
Polystyrene plate	9.4
Acrylic plate	9.6
Polycarbonate plate	8.8
Polyester film	9.9
Stainless steel plate	9.0
Aluminum plate	8.4
Glass plate	8.4

(Unit: N/20mm)
Backing: PET#25
Peeling speed: 300mm/min
Peeling angle: 180°
Measurement condition: 23°C, 50%RH
Pressure application conditions
* 1 pass back and forth with 2-kg roller

<Test method>



●180° peeling adhesion by temperature

Temperature	No.5603, No.5603BN
0°C	10.5
10°C	9.5
23°C	9.0
40°C	7.9
60°C	6.4
80°C	5.7

(Unit: N/20mm)
Backing: PET#25
Peeling speed: 300mm/min
Peeling angle: 180°
Measurement temperature: 0°C, 10°C, 23°C, 40°C, 60°C, 80°C
Application under various temperatures
→Measurement under various temperatures
Substrate: Stainless steel plate

●180° peeling adhesion at low temperatures (applied at 23°C and measured at 0°C and -10°C)

Substrate	Temperature	No.5603, No.5603BN
Stainless steel plate	0°C	10.8
	-10°C	10.4
Polyester film	0°C	7.2
	-10°C	5.7

(Unit: N/20mm)
Backing: PET#25
Peeling speed: 300mm/min
Peeling angle: 180°
Measurement temperature: 0°C, -10°C
*Applied at 23°c, 50% RH and measured at 0°C and -10°C
Substrate: Stainless steel plate
Polyester film

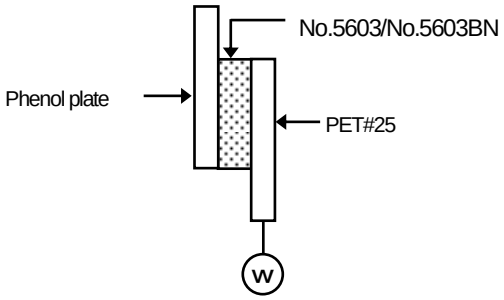
Properties

●Holding power

Temperature	No.5603, No.5603BN
40℃	0.3

(Unit: mm/hr)
Measurement temperature: 40,℃
Application area: 10mm x 20mm
Load: 4.9N (500g)
Substrate: Phenol resin plate

<Test method>

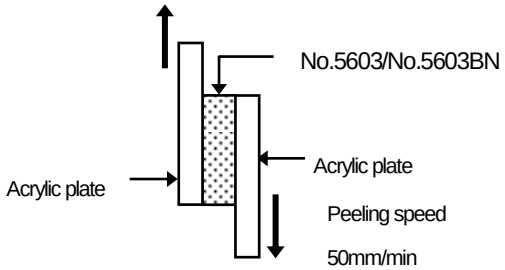


●Shear strength

Temperature	No.5603, No.5603BN
23℃	600

(Unit: N/20mmx20mm)
Substrate: Acrylic plate / acrylic plate
Tape area: 20mm × 20mm
Peeling speed: 50mm/min
Measurement temperature: 23℃, 50%RH
Measurement method: A specimen is prepared and shear strength is measured after allowing it to set 30 minutes.

<Test method>



●180° peeling adhesion by pressure

Pressure	No.5603, No.5603BN
0.1 kg	8.1
0.5 kg	8.6
2 kg	9.0
5 kg	9.2

(Unit: N/20mm)
Backing: PET#25
Peeling speed: 300mm/min
Peeling angle: 180°
Measurement condition: 23℃, 50%RH
Pressure application conditions:
* 0.1kg, 0.5kg, 2kg, 5kg
1 pass back and forth with 2-kg roller

Properties

●180° peeling adhesion after application (increase)

Temperature	Time	No.5603, No.5603BN
23 ℃	0.5 hrs	9.0
	4 hrs	9.1
	12 hrs	9.6
	24 hrs	9.9
	48 hrs	10.4
	72 hrs	10.4

(Unit: N/20mm)
Backing: PET#25
Peeling speed: 300mm/min
Peeling angle: 180°
Measurement condition: 23℃, 50%RH
Substrate: Stainless steel plate

●180° peeling adhesion (change after application)

Temperature	Time	No.5603, No.5603BN
23℃	1 day	9.9
	14 days	10.4
	30 days	11.0
40℃, 92%RH	1 day	10.0
	14 days	10.8
	30 days	11.5
50℃	1 day	10.2
	14 days	11.1
	30 days	11.8
70℃	1 day	10.4
	14 days	12.0
	30 days	13.1

(Unit: N/20mm)
Backing: PET#25
Peeling speed: 300mm/min
Peeling angle: 180°
Storage conditions: 23℃, 40℃×92%RH
50℃, 70℃
Measurement condition: 23℃, 50%RH
Substrate: Stainless steel plate

Precautions when using

●Remove all oil, moisture and dirt from the surface of the substrate before applying.

●The tape employs pressure-sensitive adhesive. Be sure to apply pressure with a roller or press when applying. Failure to do so could affect properties or appearance.

●The tape may not adhere well to significantly uneven or distorted surfaces. Level off the surface as much as possible before applying.

●Because it is very thin, you should avoid applying large loads for at least several hours following application.

Precautions when storing

●Be sure to keep the tape in its box when not using.

●Keep in a cool dark place not exposed to 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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