

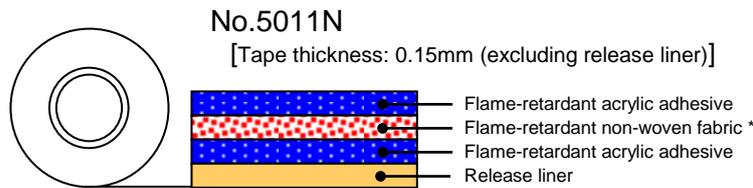
Flame-retardant double-coated adhesive tape

# No.5011N

## Outline

Nitto No.5011N is a double-coated adhesive tape consisting of flame-retardant acrylic adhesive with a flame-retardant non-woven fabric. No.5011N flame-retardant double-coated adhesive tape is flammability standard (UL94) approved.

## 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

- Superior initial adhesion.
- Excellent adhesion to rough surfaces.
- Good low-temperature adhesion.
- No.5011N is an UL94 VTM-0 approved product. [File No.: QMFZ2.E52859]
- 10 restricted substances by RoHS are not contained.

## Applications

- Electronic devices such as office equipment or house hold appliances
- Interior materials for automobiles, train cars and airplanes
- For application of other flame-retardant materials

## Sizes

Tape thickness (mm)	Width (mm)	Length (M)
0.15	3-1, 200	50

For details contact the department in charge of the product in question.

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**Properties**

- 180 degree peeling strength for each substrate

Substrate	No.5011N
Stainless steel plate	14.3
Aluminum plate	15.0
ABS plate	13.5
Acrylic plate	13.5
PSt plate	13.7
PC plate	12.5
PET plate	12.0
PP plate	13.0
Polyacetal plate	10.5
Urethane foam	7.0

(Unit: N/20mm)

Sample width: 20 mm

Backing material: PET#25

Application condition:

1 pass back and forth with a 2kg roller

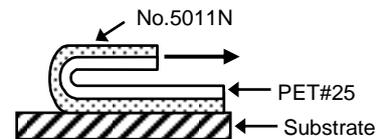
Bonding temperature: 23degreeC/50%RH

Curing condition: 23degreeC/50%RH x 30 min

Peeling speed: 300 mm/min

Peeling angle: 180degree

Measurement temperature: 23degreeC/50%RH



- 180 degree peeling strength for each temperature

Measurement temperature	No.5011N
0 degree C	16.5
23 degree C	14.3
40 degree C	12.4
80 degree C	8.8

(Unit: N/20mm)

Substrate: Stainless steel plate

Sample width: 20 mm

Backing material: PET#25

Application condition:

1 pass back and forth with a 2 kg roller

Bonding temperature: Measurement temperature

Curing condition:

Measurement temperature x 30 min

Peeling speed: 300 mm/min

Peeling angle: 180 degree

Measurement temperature: 0, 23, 40, 80 degree C

- 180 degree peeling strength for each pressure

Application	No.5011N
0.1 kg roller	11.4
0.5 kg roller	13.0
2 kg roller	14.3
5 kg roller	14.4

(Unit: N/20mm)

Substrate: Stainless steel plate

Backing material: PET#25

Application 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

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**Properties**

● Holding power

Measurement temperature	No.5011N
23 degree C	0.2
40 degree C	0.3
60 degree C	0.3
80 degree C	0.3

(Unit: mm/hr)

Substrate: Phenolic plate

Curing condition:

Measurement temperature x 30min

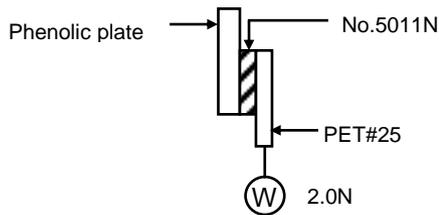
Measurement temperature:

23, 40,60,80 degree C

Application area: 20mm x 10mm

Load: 2.0N(200g)

Loading time: One hour



● Shearing strength

Substrate	No.5011N
Stainless steel plate	260
Aluminum plate	245
ABS plate	210
Acrylic plate	330
PSt plate	220
PC plate	230
PET plate	270
PP plate	210

(Unit: N/20mmx20mm)

Sample: 20mm x 20mm

Application condition:

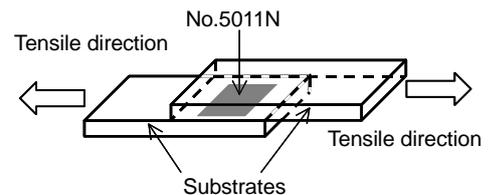
1 pass back and forth with a 5 kg roller,

Bonding temperature: 23degreeC/50%RH

Curing condition: 23degreeC/50%RH x 30 min

Measurement condition: 23degreeC/50% RH

Peeling speed: 50 mm/min



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**Properties**

- 180 degree peeling strength  
-Curing under each environment after application (Durability)

Conditions		No.5011N
Initial (23degreeC/50%RH x 30 min)		14.3
- 30 degree C x 30 days		14.6
70 degree C	1 day	15.0
	7 days	15.3
	14 days	15.6
	30 days	16.1
40 degree C /92%RH	14 days	14.7
	30 days	15.0
60 degree C/90%RH x 30 days		15.5
Heat shock [100 cycles]*1		16.0
Heat cycle [40 cycles]*2		16.1

(Unit: N/20mm)

Substrate: Stainless steel plate

Backing material: PET#25

Application condition:

1 pass back and forth with a 2 kg roller

Curing condition: See the left table

Peeling speed: 300 mm/min

Peeling angle: 180 degree

Measurement temperature: 23degreeC/50%RH

\*1: Heat shock condition

[-40degreeC x 30min ↔ 90degreeC x 30min]

x 100cycles

\*2: Heat cycle condition

[-20degreeC x 6hrs=>(1hr)=>

60degreeC/95%RH x 6hrs=>(1hr) =>] x 40 cycles

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## Precautions when using

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- 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

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- 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

 <b>WARNING</b>
<ul style="list-style-type: none"><li>● 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.</li><li>● Use in combination with another method of joining if there is possibility of an accident.</li></ul>

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