



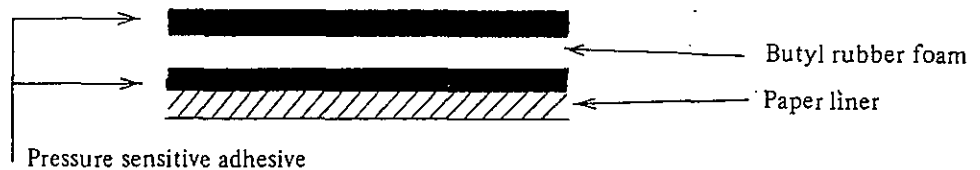
NITTO PRODUCT INFORMATION

NITTO NO. 541 DOUBLE COATED BUTYL RUBBER TAPE

— FOR HIGH ADHESION USES —

NITTO Double Coated Adhesive Tape No.541 has been developed for high-adhesion requiring application. Made from flexible, foamed butyl rubber, it adheres to any surface, rough or jagged; it can not only replace pastes, screws, nails in many fields of applications, but also be used where these can not.

1. Construction



2. Features

- 1) Sticks tight to most materials.
- 2) Flexibility assures even adhesion to the rough surfaces of concrete blocks and other materials.
- 3) Excellent adhesion even at -10°C (14°F) permits its use in outdoor mounting jobs in winter.
- 4) Foam can withstand severe shock loading.
- 5) Outstanding durability and superior resistance to heat and light in use.
- 6) Neither 800 hours of exposure to salt water spray nor 2,000 hours of exposure in a wet Weather-O-meter has effect on it.
- 7) Unaffected by weak acids or weak bases.

3. Applications

- 1) For holding the front panels of air conditioners.
- 2) For mounting name plates on any surface.
- 3) For mounting plates in various locations on cars and ships.
- 4) For temporarily fastening interior-finish materials such as decorative plywood.
- 5) For holding telephone lines or fix rosettes.
- 6) For temporarily holding curtain rails.
- 7) For holding various domestic articles in position.



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4. Standard Sizes

Thickness, mm (mil.)	Width, mm (in.)	Length, m (ft.)
0.75 (30)	15 (5/8) , 19 (3/4) 25 (1) , 38 (1-1/2) 50 (2) , 75 (3) 100 (4) , 400 (16)	10 (33)

* Also available in other sizes on request.

5. Properties

5.1 Peel-off adhesion, shear adhesion

Substrate	Measuring temp. °C (°F)	Peel-off adhesion g/25mm (oz/in.)	Shear adhesion kg/25mm.sq. (lbs/sq.in.)
Stainless steel plate	40 (104)	1,337 (41.1)	37.4 (82.4)
	20 (68)	1,462 (51.6)	46.8 (103.1)
	0 (32)	1,125 (39.7)	93.6 (206.3)
Steel plate	20 (68)	1,775 (62.6)	39 (85.9)
Glass plate		1,425 (50.3)	39 (85.9)
Bakelite plate		2,450 (86.4)	42.1 (92.8)
Polyester plate		2,012 (71.0)	40.5 (89.4)
Slate		962 (33.9)	43.6 (96.3)
Cardboard		2,056 (72.5)	35.8 (79.1)

Testing Method:—

Peel-off adhesion: 25mm (1") wide test samples.

At the testing temperature stated above, each sample was pressed onto the plate with a 2kg(4.4 lbs.) rubber roll, and rolled back once, and left for 30 minutes; then the strength required to peel off the sample was measured using a Schopper tensile tester, in accordance with ASTM D-1000.

Shear adhesion: 25mm × 25mm (1" × 1") test samples.

At 20°C (68°F), two plates were fastened together with a tape sample and pulled perpendicularly at the rate of 250mm (10") per minute using a Schopper tensile tester to measure the strength required to break the tape.



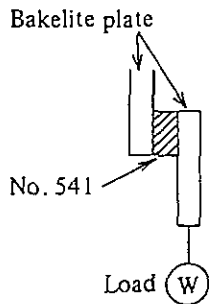
5.2 Holding capacity

Measuring temp. °C (°F)	Horizontal max. holdable load g/25mm.sq. (oz/sq.in.)	Vertical max. holdable load g/25mm.sq. (oz/sq.in.)
40 (104)	356 (12.5)	202 (8.0)
20 (68)	712 (35.0)	356 (12.5)
0 (32)	712 (25.0)	712 (25.0)

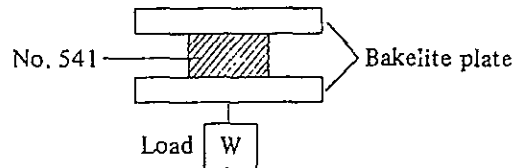
Testing Method: 25mm X 25mm (1" X 1") test samples.

Two bakelite plates were laminated with one sample tape and after being pressed with a 5kg (11 lbs.) rubber roll, and rolled back 2.5 times, loaded horizontally and vertically at each measuring temperature as illustrated in the figures below; then after passage of 50 days the maximum holding capacity of each sample was measured.

Vertical maximum holding capacity



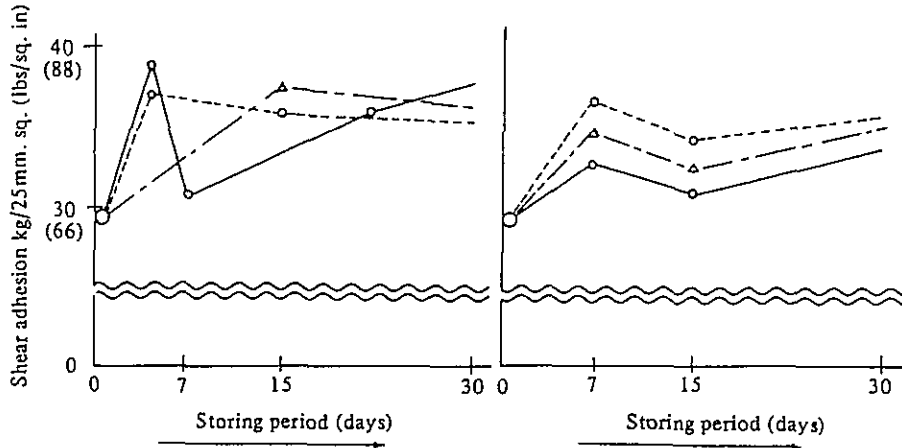
Horizontal maximum holding capacity



* This test shows one example of the method for measuring the holding capacity of the tape. For actual application, please take the safety factor into consideration.



5.3 Storability



- Weather-O-meter
- High temp. (100°C or 212°F)
- - -△- - - Low temp. (-20°C or 4°F)
- Outdoor exposure
- High temp., high humidity (50°C or 122°F) × 100% RH
- - -△- - - Water (city water)

Testing Method: Two plates were fastened together with a tape sample, and stored under strict testing conditions to measure the shear adhesion/time ratio.

All the values herein shown are average test results and are not to be taken as maximum or minimum for specification purposes.