

Nitto

Innovation for Customers

BUILDING & CONSTRUCTION



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Nitto Denko Corporation

26th Fl., Shinagawa Season Terrace, 1-2-70, Konan, Minato-ku, Tokyo 108-0075, Japan

TEL: +81-3-6632-2101 FAX: +81-3-6632-2025 <https://www.nitto.com/jp/en/>

Inquiry about Products: +81-3-6631-1637

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BUILDING & CONSTRUCTION

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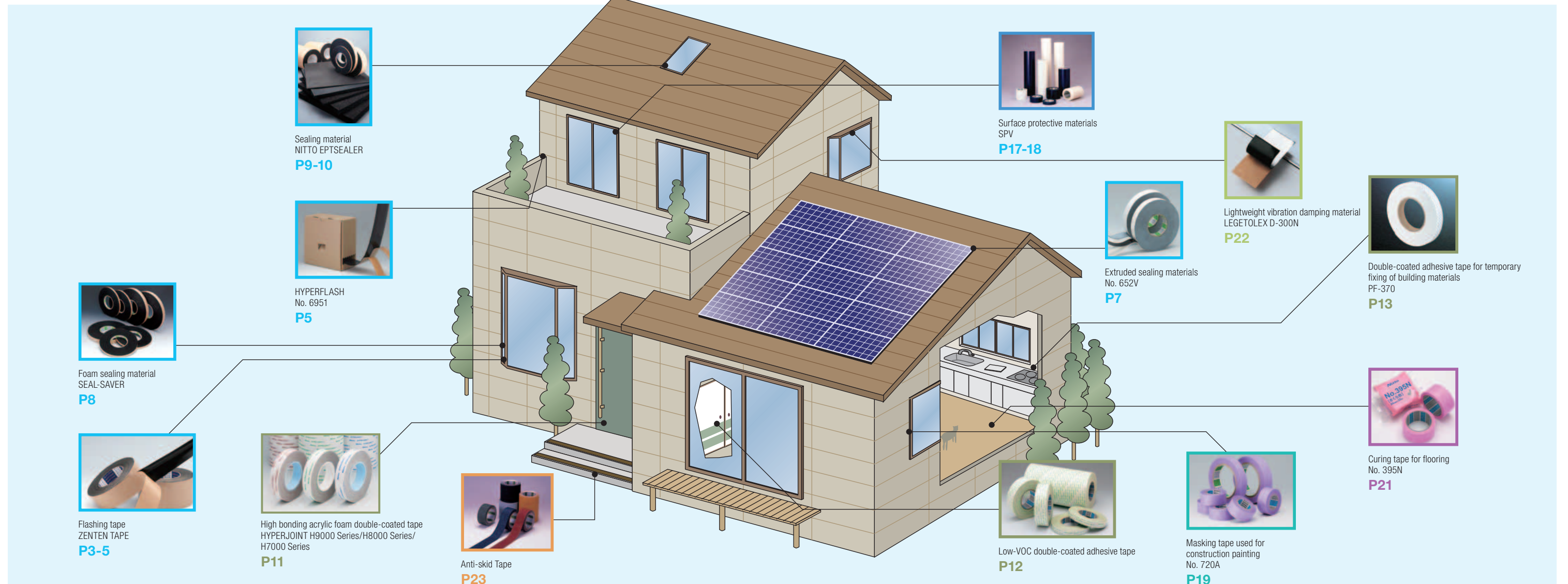
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Waterproofing and Sealing Materials

Flashing tape

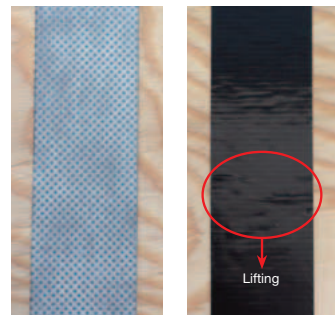


ZENTEN TAPE No. 6931 (single-coated strong-adhesion type)

Features

- Stronger adhesion than conventional products at low temperature.
- Minimal stickiness even in summer, and good workability.
- Bonds firmly to uneven surfaces.
- Offers superior properties of durability and waterproof.

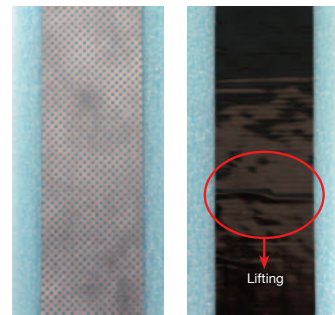
[Substrate: Softwood plywood]



No. 6931

Acrylic waterproof tape of other companies

[Substrate: Polystyrene board]



No. 6931

Acrylic waterproof tape of other companies

Flashing tape



ZENTEN TAPE No. 690 (double-coated adhesion type for DuPont™ Tyvek® HomeWrap®)

Features

- Suitable for fixing DuPont™ Tyvek® HomeWrap®

Application examples



DuPont™ and Tyvek® are trademarks or registered trademarks of E.I. du Pont de Nemours and Company in the U.S.

Flashing tape



ZENTEN TAPE No. 6922 (double-coated strong-adhesion type)

Features

- Offers stable adhesiveness at each temperature.
- Excellent adhesiveness at low temperatures.
- Bonds firmly to uneven surfaces.
- Offers superior properties of durability and waterproof.

Flashing tape



ZENTEN TAPE No. 6924 (double-coated adhesion type)

Features

- Stronger adhesion than conventional products at low temperature.
- Minimal stickiness even in summer, and good workability.
- Bonds firmly to uneven surfaces.
- Offers superior properties of durability and waterproof.

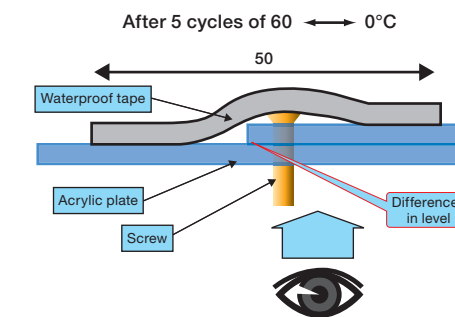
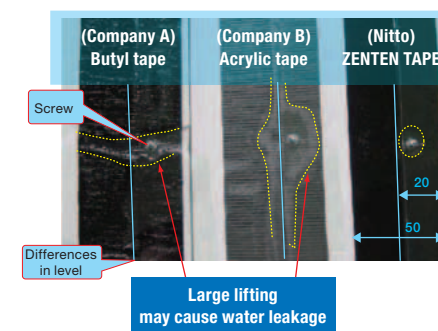
Properties/Adhesive strength

No.	Item	Measurement				Condition
		-10°C	0°C	23°C	40°C	
No. 6931	Tensile strength (N/cm)	43				Room temperature (23°C)
	Elongation (%)	30				
	Substrate/Temperature	-10°C	0°C	23°C	40°C	Unit
	Aluminum plate	27	30	18	13	N/25mm
	Softwood plywood	8	9	17	16	
	Polystyrene board	3	6	7	6	
No.690	Tensile strength (N/cm)	24				Room temperature (23°C)
	Elongation (%)	10				
	Substrate/Temperature	-10°C	0°C	23°C	40°C	Unit
	Aluminum plate	34	33	25	14	N/25mm
	Softwood plywood	8	13	19	15	
	Tyvek® HomeWrap®	5	9	20	15	
No. 6922	Tensile strength (N/cm)	20				Room temperature (23°C)
	Elongation (%)	20				
	Substrate/Temperature	-10°C	0°C	23°C	40°C	Unit
	Aluminum plate	34	33	25	14	N/25mm
	Softwood plywood	8	13	19	15	
	Moisture permeable waterproof sheet in nonwoven fabric	7	10	10	7	
No.6924	Tensile strength (N/cm)	18				Room temperature (23°C)
	Elongation (%)	18				
	Substrate/Temperature	-10°C	0°C	23°C	40°C	Unit
	Aluminum plate	30	32	24	14	N/25mm
	Softwood plywood	8	13	18	15	
	Moisture permeable waterproof sheet in nonwoven fabric	5	8	8	7	

NYG testing specification: over 3N/25mm
The above values are sample observed values, not the guaranteed performance

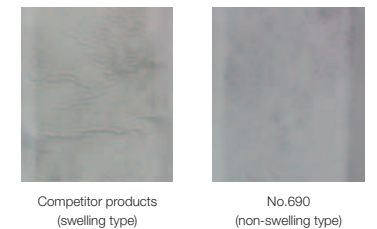
General properties

Absorbs differences in level



Non-swelling properties

ZENTEN TAPE No. 690 uses non-swelling butyl rubber adhesive. Prevents wrinkles from forming on Tyvek® HomeWrap®.



Waterproofing and Sealing Materials

Flashing tape

Hyperflash No. 6951



Features

- Can be applied to three-dimensional shapes.
- Can be applied without use of supplementary materials.
- Can be attached three dimensionally, thus enhancing waterproofing reliability.

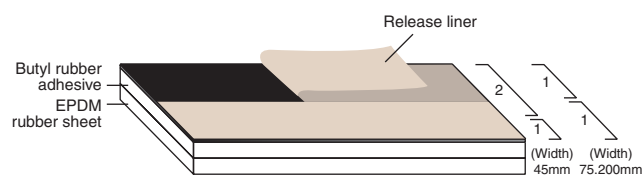
Properties

Item	Unit	0°C	23°C	40°C
Tensile strength (MD)	N/25mm	25	8	4
Elongation (MD)	%	900	1100	1330
100% modulus-initial (MD)	N/25mm	8	4	4
100% modulus-after 5min (MD)	N/25mm	2.9	1.3	0.7

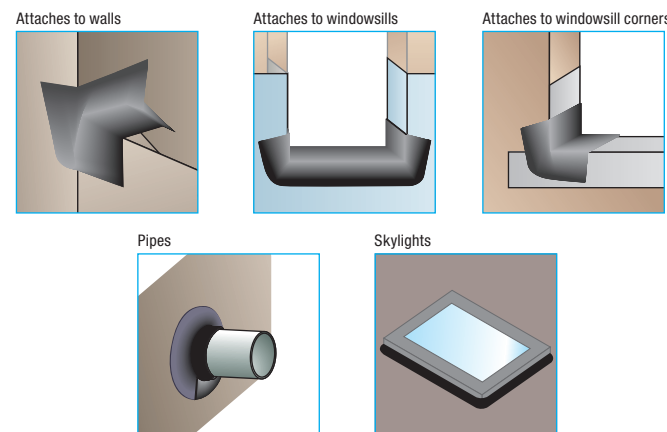
Adhesive strength

Substrate	Unit	0°C	23°C	40°C
Stainless steel plate	N/25mm	32	9	6
Softwood plywood		10	13	6
Moisture permeable waterproof sheet		22	12	6

Split liner structure



Application examples



ZENTEN Series Product Lineup

Product type	Product No.	Thickness (mm)	Width (mm)	Length (m)	Qty/cs (rls)	Structure	Application
Waterproof airtight tape (single-coated strong-adhesion type)	No. 6931	0.4	50 75 100	20	20 15 10	Backing (nonwoven fabric) Butyl rubber adhesive Release liner	<ul style="list-style-type: none"> ● Excellent waterproof properties for window sashes ● Excellent for fixing waterproof sheets and offers superior waterproofing airproofing for board joints
	LA	0.5				Reinforced film with aluminum foil Butyl rubber adhesive Release liner	
Waterproof airtight tape (double-coated adhesion type)	No. 690	0.42				Butyl rubber adhesive Plastic film Butyl rubber adhesive (expansion control type) Release liner	
	No. 6922	0.5	50 75 100	20	20 15 10	Butyl rubber adhesive Backing (nonwoven fabric) Butyl rubber adhesive Release liner	
	No. 6924	0.4					
Airtight tape (single-coated adhesion type)	EX-2	0.38	50 75 100	20	20 16 12	Plastic film (fabric) Butyl rubber adhesive	● Excellent for making indoor spaces airtight
Waterproof tape (deformable rubber substrate type)	No. 6951*1	1.3	45 75 200	5	12 8 4	Back surface treatment EPDM rubber sheet Butyl rubber adhesive Release liner	● Excellent for waterproofing windowsill corner

*1 Split release liner type available for each size. For 200mm, split liner type is available by special order only.

Airtight tape

ZENTEN TAPE EX-2



Features

- Tears easily; facilitates application.
- No release paper; facilitates handling during application.
- Excellent airtightness and durability.

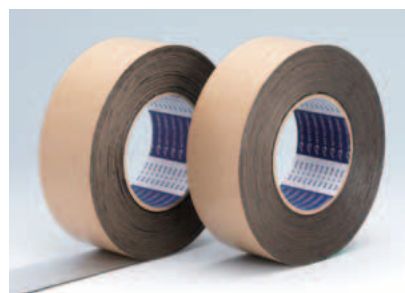
Adhesive strength

Substrate	Unit	Measurement	Condition
Stainless steel plate	N/25mm	33	Room temperature (23°C)
Plywood		19	

NYG testing specification: over 3N/25mm

Flashing tape

ZENTEN TAPE LA



Features

- Outstanding adhesiveness to rough surfaces.
- Offers excellent adhesiveness in low temperature environments.
- Low gas permeability.
- Excellent water resistance.

Properties

Substrate	Unit	Measurement
Adhesive strength	0°C	21
	23°C	26
	40°C	19
Moisture permeability	g/m ² ·24h	0.09
Resistance to moisture permeation	m ² ·s·pa/ng	6400 x 10 ⁻³

* Stainless plate as the substrate.

Waterproofing and Sealing Materials

Double-coated adhesive tape

No. 525



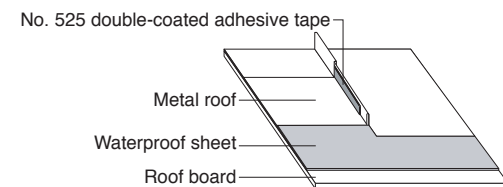
Features

- Thickly coated with special synthetic rubber adhesive; offers excellent adhesiveness and water resistance.
- Excellent weather resistance allows for long-lasting water resistance.
- Properties are not affected by weather changes

Standard sizes

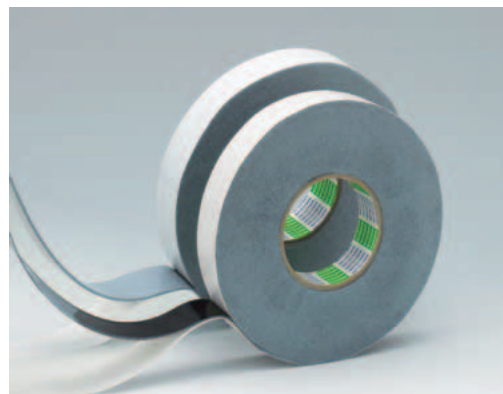
Thickness (mm)	Width (mm)	Length (m)
0.5	30/50	15
1.0		

Application examples



Extruded sealing materials

No. 652V



Features

- Superior plasticity and water-tightness. Adheres well to coarse surfaces too.
- Good adhesiveness. Easily adheres to various surfaces such as cement, mortar, metal, and wood.
- Excellent resistance to weather and chemicals.

Application examples



- Waterproofing of the metal cradle for photovoltaic panels.

Structure

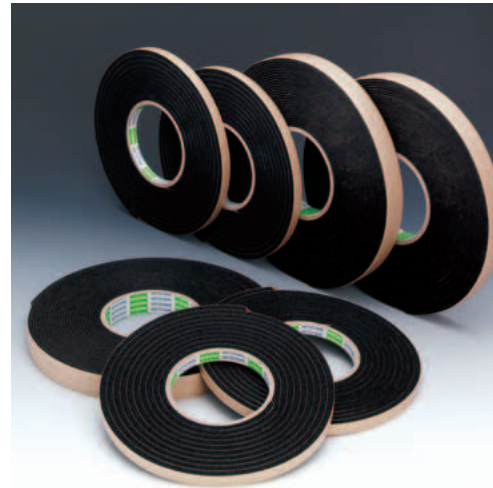


Standard sizes

Thickness (mm)	Width (mm)	Length (m)	Color
1.0	5-440	20	Gray
2.0		15	
3.0		10	

Foam sealing material

SEAL-SAVER



Features

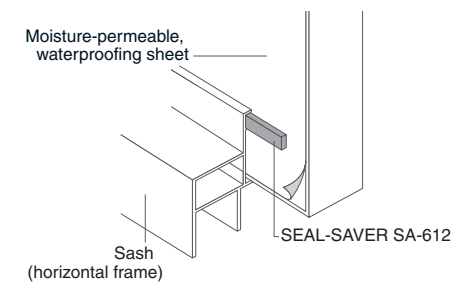
- A special waterproof layer combined with our EPDM rubber foam, which displays superior resistance to heat and chemicals (acids and alkalis). Waterproofing capability is improved after adhesion.
- Slight degree of compression makes for a highly effective water barrier with a thin expansion material.
- Flexibility and low rebound make assembly work easier.

Product Variations

Product No.	Thickness (mm)	Width (mm)	Length (m)	Color	Structure
SA-612 (High water pressure resistant type)	3/5/8/10	900	2	Black	
SA-212 (Standard type)	5/8/10				

*Made-to-order manufacturing according to thickness.

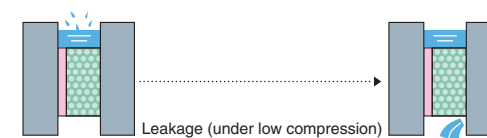
Application examples



Comparison of waterproofing mechanism

Conventional waterproofing mechanism

High pressure is required to secure watertightness.



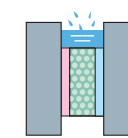
Waterproofing is achieved as the foam resilience prevents penetration of water through the interface

Over a long duration of use, the foam's pressure weakens and the foam relaxes, resulting in a gradual loss of resilience

As a result, water penetrates the interface

Waterproofing mechanism of SEAL-SAVER

Even under low pressure, waterproofing is achieved.



Special waterproof layer on the surface is affixed to the interface after assembly

After adhering, waterproofing capability improves

Waterproofing capability is well maintained

Adhesive Rubber foam Special waterproof layer

Properties

Properties

Conforms to JIS K 6767

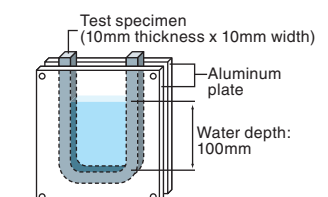
Product No.	Density (g/cm ³)	Tensile strength (N/cm ²)	Foam elongation (%)
SA-612	0.11	35.3	260
SA-212	0.08	6.0	280

Compression ratio and waterproofing performance

Compression ratio (%)	SA-612	SA-212
10	○	○
30	○	○
50	○	○
70	○	○
90	○	○

○ No water leakage after 30 min.

Test method

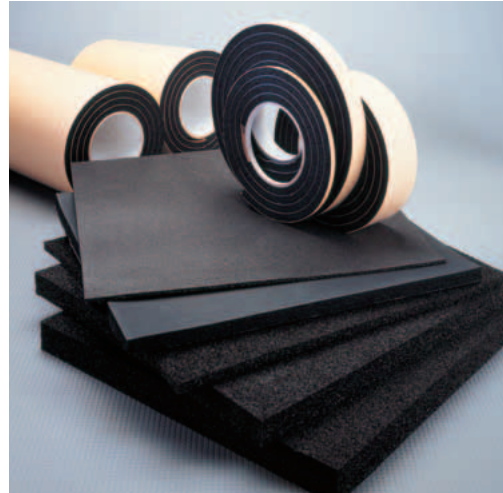


Note: U-shaped 10mm wide test specimens were punched out and placed between acrylic and aluminum plates for compression to a preset load. Then the test specimens were filled with water to the depth of 100mm and checked for leakage.

Waterproofing and Sealing Materials

Sealing material

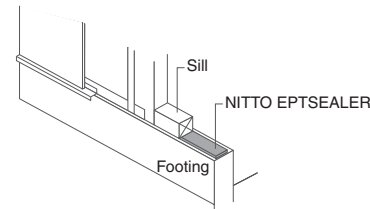
NITTO EPTSEALER



Features

- The main constituent is EPDM rubber foam, which boasts superior cold and heat resistance, weatherability and chemical resistance (to acids and alkalis) compared with general purpose rubbers.
- Cell structure offers choice of closed cells and semi-closed cells according to the user's needs.

Application examples

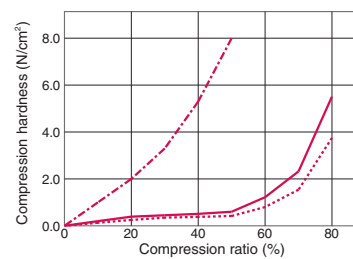


Standard sizes

Product No.	Color	Foam Thickness (mm) (foam only)	Foam Thickness (mm) (with double-coated tape)	Width (mm)	Length (m)
No.6800	Black	2-15	2-15	1000	2
No.685		5-35	3-40		
EE-1000		5-25	3-25		
EC-100		5-20	3-25		
EC-200		5-20	3-25		
EH-2200		3-20	3-20		

Properties

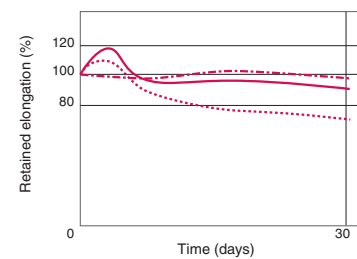
Compression ratio and hardness



Note: Compression speed: 10mm/min.

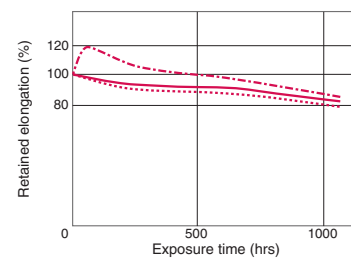
$$\text{Compression ratio (\%)} = \frac{\text{Precompression thickness} - \text{Postcompression thickness}}{\text{Precompression thickness}} \times 100$$
 Each 10cm x 10cm test specimen was compressed at the rate of 10mm/min. until the preset thickness was reached. The compression load was measured after a 10 second delay.

Heat resistance



Note: Test specimens prepared using #1 dumbbell die were exposed to an 80°C condition. At the end of each time interval, the test specimens were stretched at the rate of 500mm/min., and the maximum elongation before rupture was measured. Retained elongation was calculated as a percentage of the brand new specimen's elongation.

Weather resistance

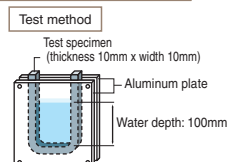


Note: Each test specimen was placed in a sunshine carbon weather meter and taken out after a set time to measure the elongation by stretching at the rate of 500mm/min. Retained elongation was calculated as a percentage of the new specimen's elongation.

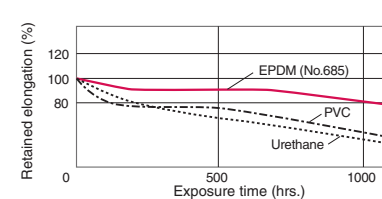
Watertightness

Item	Watertightness		
	No. 6800	No. 685	EE-1000
50	○	×	×
60	○	△	×
70	○	○	△
80	○	○	○

Note: U-shaped 10mm wide test specimens were punched out and placed between acrylic and aluminum plates for compression to a preset load. Then the test specimens were filled with water to the depth of 100mm, and checked for leakage.

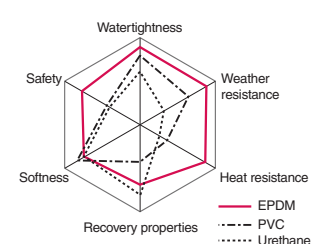


Comparison of weather resistance



Note: Each test specimen was placed in a sunshine carbon weather meter and taken out after a set time to measure the elongation by stretching at the rate of 500mm/min. Retained elongation was calculated as a percentage of the new specimen's elongation.

Good balance of general properties



Product Variations

Structure	Foam type	Color	Product No.	Adhesive	Carrier of adhesive
Closed cell structure 	No. 6800 Series	Black	No. 6800	Foam only	
			No. 681	Acrylic adhesive	Baseless
			No. 6801		Nonwoven fabric
			No. 6801P		Film
			EM-142	Rubber adhesive	Cotton fabric base
Semi-closed cell structure 	No. 685 Series		No. 685	Foam only	
			No. 686	Acrylic adhesive	Nonwoven fabric
			No. 686P		Film
			No. 687	Rubber adhesive	Cotton fabric base
			Before compression After compression 	EE-1000 Series	EE-1000
EE-1010	Acrylic adhesive				Nonwoven fabric
EE-1010P					Film
EE-1040	Rubber adhesive				Cotton fabric base
EC-100 Series	EC-100 Series				EC-100
			EC-110	Acrylic adhesive	Nonwoven fabric
		EC-111P	Film		
		EC-140	Rubber adhesive	Cotton fabric base	
		EC-200 Series	EC-200 Series	EC-200	Foam only *UL-94 HBF certified foam (certified thickness follows the UL Yellow Card)
EC-210	Acrylic adhesive			Nonwoven fabric	
EC-210P				Film	
EC-240	Rubber adhesive			Cotton fabric base	
EH-2200 Series	EH-2200 Series			EH-2200	Foam only *UL-94 HBF certified foam (certified thickness follows the UL Yellow Card)
		EH-2210	Acrylic adhesive	Nonwoven fabric	

Fixing and Temporary Fixing Products

High bonding acrylic foam double-coated tape

HYPERJOINT® H9000 Series/H8000 Series/H7000 Series



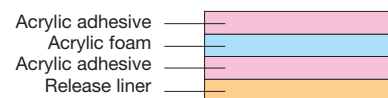
Features

- Excellent adhesion to various substrates and high heat/water resistance.
- The highly conformable foam provides excellent adhesion to the most challenging surfaces.
- The H9000 series follows ragged surface or distortion of substrates with its highly conformable foam backing and can obtain the maximum bonding area.
- The H8000 series shows the smallest amount of distortion when external force is applied. Excellent shear adhesion strength.
- The H7000 series product features high backing strength and retention capacity.
- HYPERJOINT conforms to JIS Z 1541 category 1 class 1.

Standard sizes

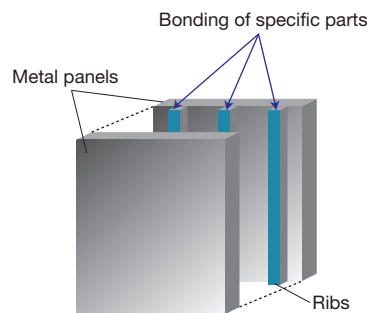
Type	Product No.	Thickness (mm)	Handling width (mm)	Length (m)	90° peel adhesion (N/25mm)
Extra Soft	H9004	0.4	5-1150	20	33.0
	H9008	0.8			55.0
	H9012	1.2			60.0
Soft	H8004	0.4			43.0
	H8008	0.8			55.0
	H8012	1.2			62.0
Regular	H7004	0.4			60.0
	H7008	0.8			66.0
	H7012	1.2			82.0

Structure

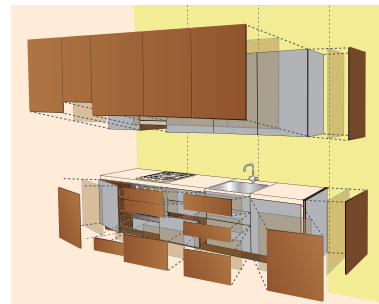


Application examples

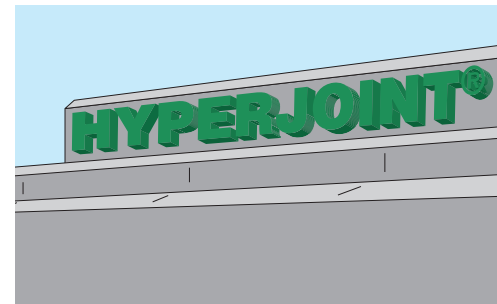
● Fixing ribs to metal panels



● Fixing kitchen's decoration panel

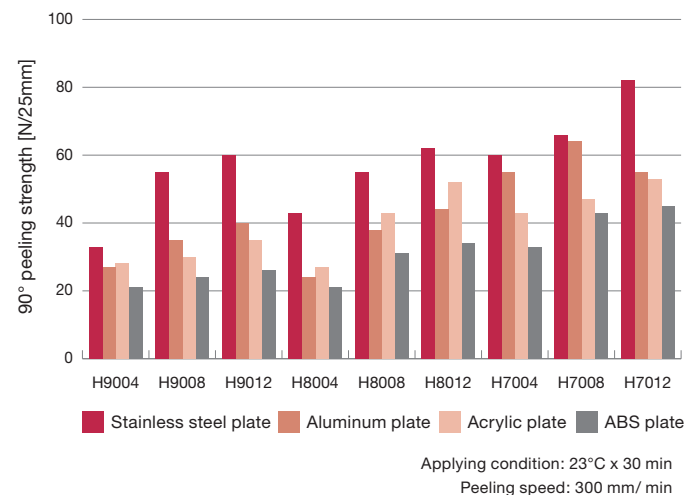


● Fixing LED modules for signs

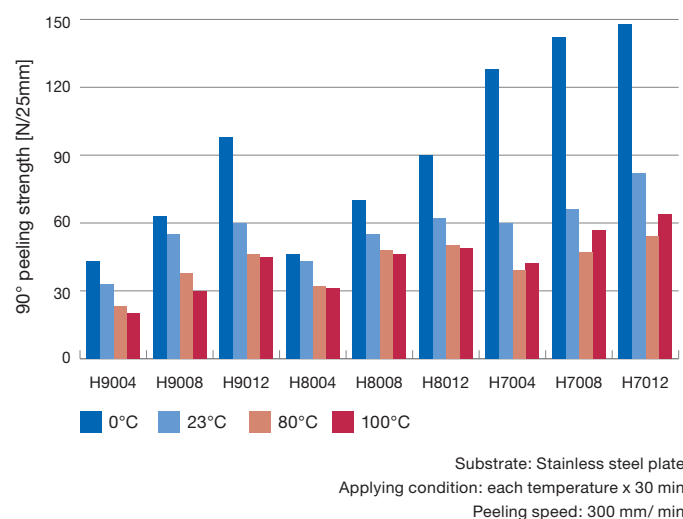


Properties

■ Superior adhesion to various substrates
90° peeling strength –by substrate–



■ Superior adhesion from low temperatures to high temperatures
90° peeling strength –by temperature–



Low-VOC double-coated adhesive tape

No. 510/No. 512/No. 515/EW-514/EW-514D/OW-5016



Features

- Low-VOC double-coated adhesive tapes conform to the Japanese Ministry of Health, Labour and Welfare's guidelines for indoor densities of VOCs*1 (13 substances).
 - Uses no organic solvents (toluene, xylene).
 - Adheres well to interior materials.
 - Works exceptionally well in adhering to various types of materials.
 - Features outstanding processability and workability.
- *1 Volatile Organic Compounds

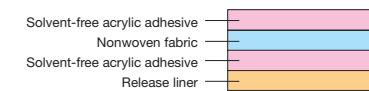
Application examples

- Fixing of metal plates
- Fixing of plastic plates
- Fixing and adhering of foam materials (No. 510)

Standard sizes

Product No.	Thickness (mm)	Width (mm)	Length (m)
No. 510 (high-holding power type)	0.15	10/15/20/ 25/50/400	20/50
No. 512 (initial adhesive strength type)	0.15		
No. 515 (high-holding power/thick type)	0.25		
EW-514 (curve adhesive strength type)	0.14	50	
EW-514D (curve adhesive strength type)	0.28		
OW-5016 (Oil surface adhesive strength type)	0.16		

Structure

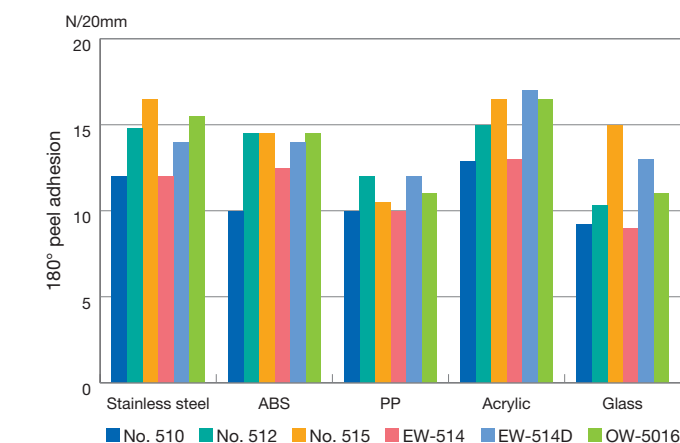


Properties

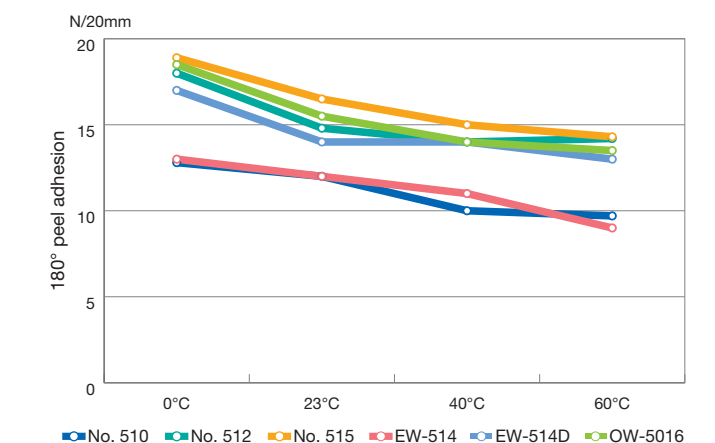
Measured substance	MHLW guidelines [$\mu\text{g}/\text{m}^3$]	No. 510	No. 512	No. 515	EW-514	EW-514D	OW-5016
Formaldehyde	100	ND	ND	ND	ND	ND	ND
Acetaldehyde	48	ND	ND	ND	ND	ND	ND
Toluene	260	ND	ND	ND	ND	ND	ND
(o-m-p-) xylene	870	ND	ND	ND	ND	ND	ND
Ethylbenzene	3800	ND	ND	ND	ND	ND	ND
Styrene	220	ND	ND	ND	ND	ND	ND
Tetradecan	330	ND	ND	ND	ND	ND	ND
Di (2- ethylhexyl) phthalate	120	ND	ND	ND	ND	ND	ND
Di-n-butyl phthalate	220	ND	ND	ND	ND	ND	ND
Diazinon	0.29	ND	ND	ND	ND	ND	ND
Fenobucarb	33	ND	ND	ND	ND	ND	ND
Paradichlorobenzene	240	ND	ND	ND	ND	ND	ND
Cholorpyrifos	1	ND	ND	ND	ND	ND	ND

ND = not detected (below detectible limits) <analysis conditions> JIS A1901 Conforms to small chamber method.

■ Excellent adherence to different substrates.
180° peel adhesion testing



■ Maintains superior adhesive strength for temperatures ranging from low to high
180° peel adhesion testing



Fixing and Temporary Fixing Products

Low-VOC general-purpose double-coated adhesive tape



No.5015EF

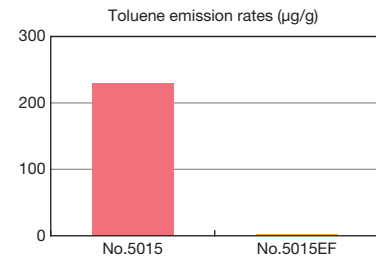
Features

- Reduces the amount of VOC emitted
- Excellent adhesion to various materials including metal and plastic
- Can be used in a wide range of temperatures

Application examples

- Fixing of building and construction materials

■ The reduction of the amount of the VOC (Volatile Organic Compound) from the tape because the organic solvent toluene is not used.



Low-VOC general-purpose double-coated adhesive tape



No. 523

Features

- Superior adhesion to uneven surfaces.
- Offers superior cushioning characteristics.
- No adhesive leakage; applies cleanly.

Application examples

- Fixing of carpet



Double-coated adhesive tape for temporary fixing of building materials



PF-370

Features

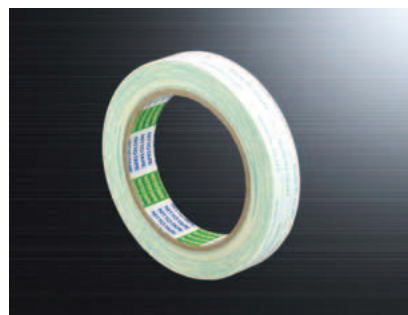
- High level of flexibility, and excellent adherence to rough surfaces
- Excellent initial adhesion
- Excellent adhesion, for more than sufficient holding or fixing while adhesive is hardening
- Excellent low temperature adhesion

Application examples

- Temporary fixing of household interior finishing materials



Multi-purpose double-coated adhesive tape



No. 5015

Features

- Offers stable adhesive strength to various materials such as metals and plastics.
- Can be used in a wide range of temperatures.
- Superior repulsion resistance.
- UL969 certified (File No.PGGU2. MH13557)

Application examples

- Fixing of items continuously supporting slight force such as nameplates and foams

Double-coated adhesive tape for plastics and foams

TW-Y01



Features

- Easily applied, not only to metal but also to rough surfaces such as foams and plastics.
- Excellent repulsion resistance

Application examples

- For bonding materials such as plastics, foams, and vinyl chlorides.

Double-coated adhesive tape product lineup

Product type	Product No.	Size			General properties 180° peel adhesion (N/20mm)	Application examples
		Backing	Tape thickness ^{*1} (mm)	Applicable width (mm)		
High bonding acrylic foam double-coated adhesive tape	H9004	Acrylic foam	0.4	5-1,150	33.0 ^{*2}	Fixing of fire door frames Fixing of various types of metal components
	H9008	Acrylic foam	0.8	5-1,150	55.0 ^{*2}	
	H9012	Acrylic foam	1.2	5-1,150	60.0 ^{*2}	
	H8004	Acrylic foam	0.4	5-1,150	43.0 ^{*2}	
	H8008	Acrylic foam	0.8	5-1,150	55.0 ^{*2}	
	H8012	Acrylic foam	1.2	5-1,150	62.0 ^{*2}	
	H7004	Acrylic foam	0.4	5-1,150	60.0 ^{*2}	
	H7008	Acrylic foam	0.8	5-1,150	66.0 ^{*2}	
Low-VOC double-coated adhesive tape	No.510	Nonwoven fabric	0.15	3-1,200	12	For general purpose Fixing of foam, plastic plates, interior joinery subsidiary materials and metal nameplates
	No.512	Nonwoven fabric	0.15	3-1,200	14.8	
	No.515	Nonwoven fabric	0.25	3-1,200	16.5	
	EW-514	Nonwoven fabric	0.14	3-1,200	12	
	EW-514D	Nonwoven fabric	0.28	10-1,200	14.0	
	OW-5016	Nonwoven fabric	0.16	3-1,000	15.5	
Low-VOC general-purpose double-coated adhesive tape	No. 523	Fabric	0.5	25,30,40,50	-	Fixing of carpet
General-purpose nonwoven fabric base double-coated adhesive tape	No.500	Nonwoven fabric	0.17	3-1,200	12.5	Bonding punched metal nameplates Bonding of foam, adhesion to uneven surfaces Adhesion of metal sheets and plastic sheets
	No.507	Nonwoven fabric	0.3	3-1,200	10.4	
	No. 5000NS ^{*3}	Nonwoven fabric	0.16	3-1,200	16	
Double-coated adhesive tape for temporary fixing of building materials	PF-370	Special polyurethane foam	1.2	3-960	12.5	Temporary fixing of household interior finishing materials
Multi-purpose double-coated adhesive tape	No. 5015	Nonwoven fabric	0.12	3-1,200	16	Fixing of items such as metal plates and foams
Double-coated adhesive tape for plastics and foams	TW-Y01	Nonwoven fabric	0.17	3-1,050	15.2	For bonding materials such as plastics and foams
Double-coated adhesive tape for fixing of various types of building materials and nameplates	No. 541	Butyl rubber foam	0.75	3-1,050	12.4	Fixing of various types of building materials and nameplates
	No. 575	Rigid polyethylene foam	1.2	5-940	22.7	
Double-coated adhesive tape for fixing of rubber materials	VR-5321	Polyester film	0.15	3-1,200	Side 1: 20.4, Side 2: 11.8	Temporary fixing of vulcanized rubber packing materials

*1: Tape thickness is excluding release liner. *2: N/25mm, Peeling angle=90° *3: No. 5000NS is strong adhesion and re-peeling.
* In addition to these products, many other types of double-coated adhesive tapes are available.

Piping Products

Vinyl adhesive tape for piping

No. 21 (TOKUHABA)



Features

- Suitable for protection of pipes.
- Easy unwinding and superior workability.
- * Uses no materials that contain such heavy metals as lead.

Standard sizes

Thickness (mm)	Width (mm)	Length (m)	Color (9 colors)
0.2	38/50	10/20	Clear, red, blue, green, yellow, white, black, gray, ivory

Fluoroplastic Products

Fluoroplastic adhesive tape

NITOFLON® Adhesive Tape No. 903UL



Application examples

- Heat-resistant masking
- Heat-resistant electrical insulation

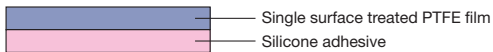
Size

Product No.	Thickness (mm)	Width (mm)	Length (m)
No.903UL	0.08-0.13	13/15/19/20/25/30/38/40/50/75/80/100/150/200/250/300/350/400/450	10

Properties

Product No.	Thickness (mm)	180° peel adhesion (N/19mm)	Tensile strength (N/19mm)
No.903UL	0.08	5.6	55
	0.13	7.1	93

Structure



Fluoroplastic resin impregnated glass cloth adhesive tape

NITOFLON® Adhesive Tape No. 973UL-S/No. 973UL



Application examples

- Heat-resistant masking
- Heat-resistant electrical insulation

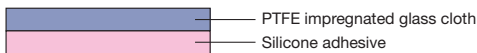
Size

Product No.	Thickness (mm)	Width (mm)	Length (m)
No.973UL-S	0.13	10/15/19/20/25/30/38/40/50/75/80/100/150/200/250/300/350/400/450	10
No.973UL	0.15/0.18		

Properties

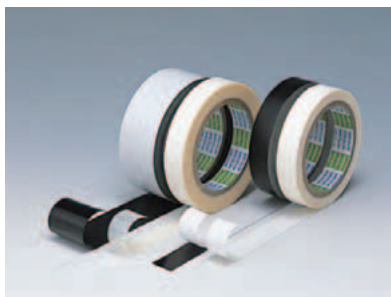
Product No.	Thickness (mm)	180° peel adhesion (N/19mm)	Tensile strength (N/19mm)
No.973UL-S	0.13	6.8	240
	0.15	9.0	590
No.973UL	0.18	9.7	530

Structure



UHMWPE film and adhesive tape

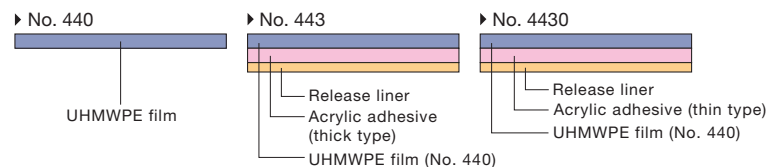
No. 440/No. 443/No. 4430



Features

- Extremely high impact resistance compared to adhesive tapes using other plastic films
- Excellent wear resistance and self-lubricating properties

Structure



Size

Product No.	Thickness (mm)	Width (mm)	Length (m)
No.440	0.1/0.13/0.2/0.3	300/350	10/30/50
No.440 (Black)			10/30
No.443	0.1/0.13/0.2/0.25/0.3	300/350	10/30/50
No.443 (Black)			10/30
No.4430	0.13/0.2/0.25	13/19/25/50/75/100/300/350	10/30/50
No.4430 (Black)			10/30/50

* The thicknesses shown for No. 443, No. 443 (Black), No. 4430, No. 4430 (black) represent the substrate thickness.

Fluoroplastic Porous Film Products

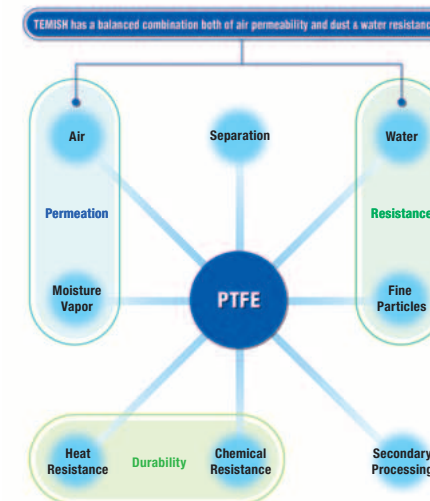
High performance vent filter

TEMISH®

TEMISH features

TEMISH is a collective name for Nitto's series of PTFE (Polytetrafluoroethylene) porous membrane products. With hundreds of millions of micropores/cm², this series features waterproofing, dustproofing and air permeability. It also exhibits water, heat, chemical and weather resistance, along with exhibiting electrical properties, as excellent attributes of PTFE resin.

Function



Application examples

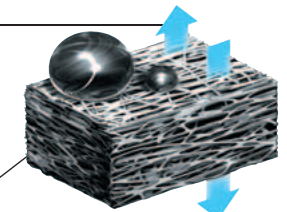


Various types of home application devices

Structure

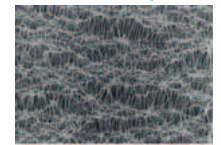
Water resistance

TEMISH has a 0.1μm to 10μm porous membrane, therefore it has excellent water-resistance against 100μm to 300μm of water droplets/rain.



Air permeability

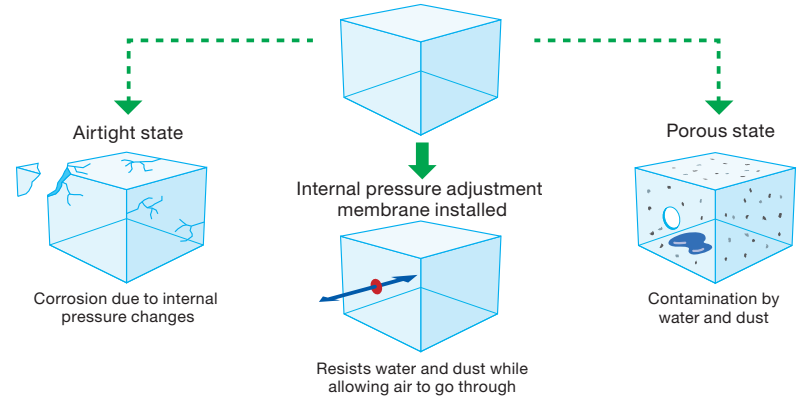
TEMISH allows 0.0004μm of water vapor to pass through 0.1μm to 10μm of porous membrane.



Properties

- Protects from corrosion by adjusting the pressure difference of the housing while resisting water and dust.
- Can be used in a wide range of areas including automotive, office appliances, household appliances and medical fields.

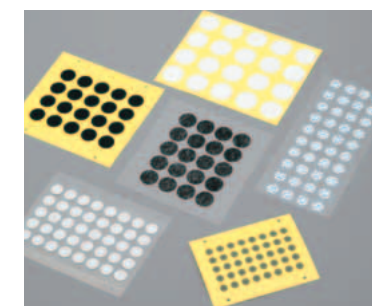
TEMISH functions



Product lineup

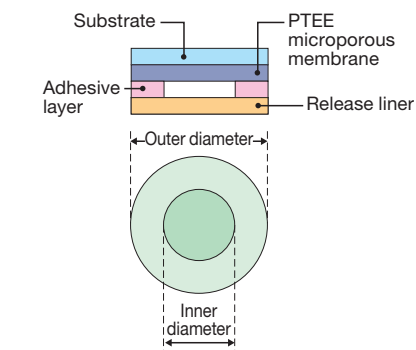
Type	Substrate	Product No.	Thickness (mm)	Air permeability*1		Water resistance*2 (kPa)	Features
				Gurley (sec)	Frazir (cm ³ /cm ² -sec)		
Two-layered product Standard type	Polyester Net	S-NTF1033-N06	0.10	-	5	7	High air permeability
		S-NTF1026-N06	0.10	10	-	200	High water resistance
Single-layered product Oil-repellent type	-	S-NTF810A	0.30	7	-	150	Oil repellency, high water resistance, reversible membrane, no difference between front and back sides, high heat resistance
Two-layered product Oil-repellent type	Polyester net	S-NTF2026A-N06	0.10	10	-	200	Oil repellency, high water resistance
	Printed polyester nonwoven fabric	S-NTF2131A-PS06	0.20	12	-	100	Oil repellency, high water resistance

*1 JIS P 8117 Gurley testing method, JIS L 1092 Frazir testing method *2 JIS L 1092 B Method (high water pressure)



Products processing TEMISH with double-coated adhesive tapes are also available.

Composition of general type



Surface Protective Materials

Surface protective material for aluminum sashes



SPV®-A Series

Features

- SPV-A-6050/A-8050 are environment-friendly surface protective materials that use water-based adhesive and polyethylene film as the backing.
- Offers superior adhesiveness to aluminum sashes.
 - Easily peels off after use.
 - Does not depend largely on surface roughness of substrate.
 - Offers outstanding weatherability (excluding SPV-AW-303S white type).

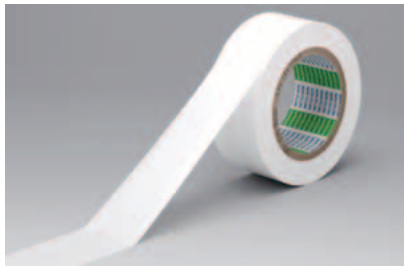
Properties

Product No.	Thickness (mm)	90° peel adhesion (N/20mm)	Tensile strength (N/20mm)	Elongation (%)	Weatherability (S-W-M(h))
SPV-A-6050	0.065	2.75	30	250	500
SPV-A-8050	0.085	3.00	35	250	500
SPV-AW-303S	0.120	4.50*1	35	250	White 50/ Black 500

* Stainless steel BA plate as the substrate. Peeling speed: 300mm/min

*1 180° peel adhesion

Surface protective material for draining plate



SPV®-CB-800K

Features

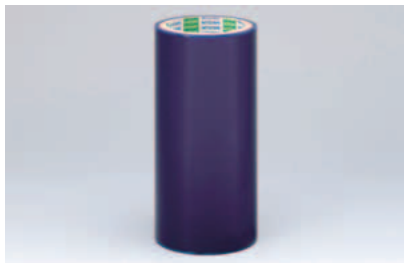
- Superior adhesive properties on rough surfaces.
- Also suited to the harsh environments such as outdoors.

Properties

Product No.	Thickness (mm)	180° peel adhesion (N/20mm)	Tensile strength (N/20mm)	Elongation (%)	Weatherability (S-W-M(h))
SPV-CB-800K	0.065	11.00	60	700	1000

* Stainless BA plate as the substrate. Peeling speed: 300mm/min

Surface protective material for glass curing



SPV®-224R

Features

- Protects glass at construction sites from welding sparks, scratches and dust.
- Applicable to outdoor use.
 - RoHS directive compliant product

Properties

Product No.	Thickness (mm)	180° peel adhesion (N/20mm)	Tensile strength (N/20mm)	Elongation (%)	Weatherability (S-W-M(h))
SPV-224R	0.080	1.00	50	200	500

* Stainless steel BA plate as the substrate. Peeling speed: 300mm/min

Surface protective material for colored metal plates



SPV®-C Series/364 Series

Features

- Offers superior protection for colored metal plates during transportation and processing.
- Minimal change in adhesive strength following application ensures easy peeling.
 - Superior transparency enables inspection of the surface condition of the substrate without removing the tape.
 - Depending on the surface roughness and degree of processing, the most suitable product among a wide range of adhesive strength products can be used.

Properties

Product No.	Thickness (mm)	90° peel adhesion (N/20mm)	Tensile strength (N/20mm)	Elongation (%)	Weatherability (S-W-M(h))
SPV-C-100	0.060	0.70	25	250	150
SPV-C-200		1.40			
SPV-C-300		1.80			
SPV-C-400		2.00			
SPV-C-500		2.50			
SPV-C-600	0.090	2.50	30	220	—
SPV-364CK	0.050	2.70	45	600	50
SPV-364MK	0.055	3.40			

* Stainless steel BA plate as the substrate. Peeling speed: 300mm/min

Surface protective material for stainless steel and aluminum plates



SPV®-ME-4001

Features

- An environment-friendly surface protective material, that use special polyethylene film as the backing.
- Excellent application throughout the year
 - Applicable for bending processability.

Properties

Product No.	Thickness (mm)	180° peel adhesion (N/20mm)	Tensile strength (N/20mm)	Elongation (%)	Weatherability (S-W-M(h))
SPV-ME-4001	0.100	3.40	42	450	300

* Stainless steel BA plate as the substrate. Peeling speed: 300mm/min

Surface protective material for stainless steel and aluminum plates



SPV®-M-6020/M-6030

Features

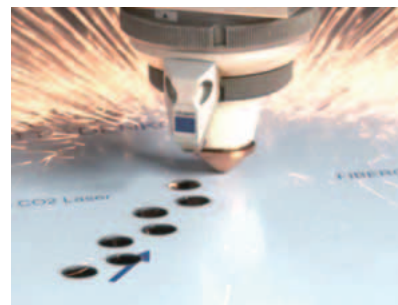
- An environment-friendly surface protective material, that uses water-based adhesive and polyethylene film as the backing.
- Environment-friendly due to no organic solvents being used from the manufacturing stage.
 - Easily peels off after use.
 - Adhesion at low temperatures can be easily done.
 - Ideal for light processing.

Properties

Product No.	Thickness (mm)	180° peel adhesion (N/20mm)	Tensile strength (N/20mm)	Elongation (%)	Weatherability (S-W-M(h))
SPV-M-6020	0.060	1.80	30	300	150
SPV-M-6030		2.50			

* Stainless steel BA plate as the substrate. Peeling speed: 300mm/min

Surface protective material for laser cutting



LASERGUARD Series

Features

- The best product models can be selected depending on laser processing machines and content of operations.
- No need for film peeling-off work that was previously required before processing; this can lead to shortened working hours.
 - SPV-LG-4002 (for CO₂) and SPV-310GH5 (for both CO₂ and fiber) are added to our product lineup as high-strength adhesive types designed with an emphasis on film peel-off prevention with assist gas.
 - SPV-LG-4000 (for CO₂) and SPV-310GH3/SPV-3080H3 (for both CO₂ and fiber) are added to our product lineup as middle-strength adhesive types designed with an emphasis on light releaseability.
 - Finer finishing by twice cutting pierced parts or cut sections.

Properties

Product No.	Thickness (mm)	180° peel adhesion (N/20mm)	Tensile strength (N/20mm)	Elongation (%)	Weatherability (S-W-M(h))
SPV-LG-4000	0.100	2.70	30	250	75
SPV-LG-4002		4.50			
SPV-310GH5		4.00			
SPV-310GH3	0.080	1.70	40	320	150
SPV-3080H3		1.50			

* Stainless steel BA plate as the substrate. Peeling speed: 300mm/min. Aging: 20-40 minutes

Masking

Masking tape used for construction painting

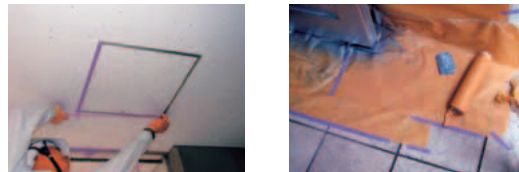


No. 720A

Features

- Uses special adhesive that has weather resistance and leaves almost no adhesive residue when peeled.
- Tough backing keeps the tape from tearing when peeled.
- Easy to unwind, can be applied in a straight line.

Application examples



Masking tape used for construction painting



No. 720

Features

- Offers superior quality/balance such as excellent adhesive strength, backing strength, cutting and adhesive residue properties.
- Tape will not come off while painting.

Application examples



Masking tape used for sealing



No. 727

Features

- Easy to unwind; better workability.
- Adheres well to rough and uneven surfaces; offers superior properties.
- Adheres to glass and leaves almost no adhesive residue when peeled.
- Doesn't tear when peeled, and can be used for any type of primer.

Application examples



Masking tape used for painting



No. 7288

Features

- Does not change color or leave adhesive residue, even after used for 30minutes in a 150°C condition.
- Excellent workability; does not tear when peeled.
- Backing of the tape does not repel paint.
- Gives excellent paint break line.

Application examples



Masking tape used for automobile painting

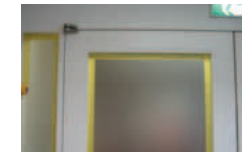


No. 7239

Features

- Superior heat resistance.
- Superior cutting enables easy workability.
- Can be used reliably on rubber and plastic areas and be applied in overlapping layers.
- Soft backing allows tape to firmly attach to break lines on straight-line sections as well as to curved areas.
- Almost no lifting, peeling or adhesive residue.

Application examples



General properties

Product No.	Color	Adhesive	Thickness (mm)	180° peel adhesion (N/18mm)	Unwinding force (N/18mm)	Tensile strength (N/18mm)
No.720A	Purple	Acrylic	0.100	3.3	2.3	58
No.720	White	Rubber	0.100	2.3	4.3	78
No.727	Red	Acrylic	0.105	3.6	2.2	75
No.7288	Yellow	Acrylic	0.100	3.6	6.0	66
No.7239	Yellow	Acrylic	0.090	3.6	6.0	75

Crepe masking tape used for automobile painting



No. 7290/No. 7291

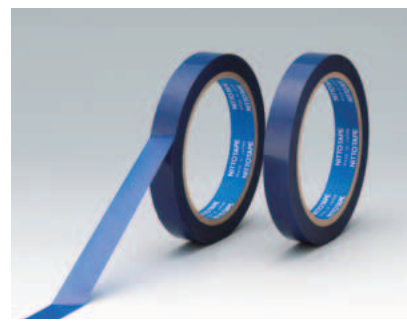
Features

- Significant elongation allows for curves to be drawn easily.
- Excellent tape strength; doesn't tear when peeled.
- Backing of the tape does not repel paint.
- Easy to unwind; better workability.

Standard sizes

Width (mm)	Length (m)	Qty/cs (rls)	Width (mm)	Length (m)	Qty/cs (rls)
12	50	120	25	50	60
15		90	38		36
19		60	50		30

Crepe masking tape used for painting



Polyester masking tape MT-3155

Features

- Features excellent linearity since polyester film is used as its base material; it also features fine break-line finish due to its thinness.
- Paint attached to the backside of the tape does not fall off easily while being peeled off, and does not contaminate surrounding areas.

Properties

Thickness (mm)	180° peel adhesion (N/18mm)	Tensile strength (N/18mm)	Elongation (%)
0.05	6.7	90	150

Curing

Curing tape for flooring

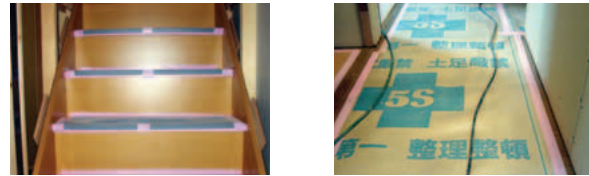
No. 395N



Features

- Minimizes misalignment and warpage of curing materials.
- Firmly adheres to polyethylene laminated curing paper.
- Leaves almost no adhesive residue even after being applied for an extended period of time.
- Uses no raw materials containing halogen or heavy metals such as lead.

Application examples



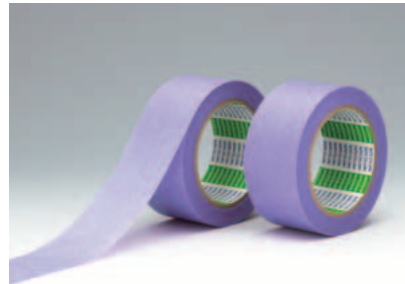
*Please avoid use on plain wood, vinyl chloride material, stone materials such as marble, or dressed lumber. When using on solid wood, please check carefully beforehand since adhesive residue is possible depending on the material.
*Depending on the material of the substrate, period of application, and environment, damage to substrate and adhesive residue may occur. Please check carefully before use.

Standard sizes

Thickness (mm)	Width (mm)	Length (m)	Qty/cs (rls)
0.125	25	25	60
	38	25/50	48
	50	25/50	30

Washi curing tape

No. 720A



Features

- Uses special adhesive that lessens the possibility of damaging the substrate and adhesive residue.
- Tape does not break when peeling and can be easily peeled off.
- Light rewinding, excellent workability.

Application examples



*Please avoid use on plain wood, vinyl chloride material, stone materials such as marble, or dressed lumber. When using on solid wood, please check carefully beforehand since adhesive residue is possible depending on the material.
*Depending on the material of the substrate, period of application, and environment, damage to substrate and adhesive residue may occur. Please check carefully before use.

Standard sizes

Thickness (mm)	Width (mm)	Length (m)	Qty/cs (rls)
0.10	38	50	84
	50		36

Adhesive tape for curing

NITOCLOTH No. 7500/No. 7503



Features

- Offers superior adhesive strength, cutting property, intensity and weather resistance characteristics.
- There is hardly any adhesive residue when peeled off.

Standard sizes

Product name	Color	Width (mm)	Length (m)	Individual package	Qty/cs (rls)
No. 7500	Brown, green, coral	25	25	1 roll in pillow type package	60
		30			60
		38			30
No. 7503		50			30

Soundproofing

Lightweight vibration damping material

LEGETOLEX D-300N



Features

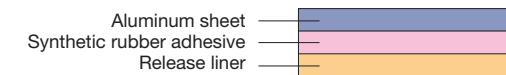
- A large damping effect can be obtained by simply applying a small amount to metal ceiling surfaces (about 30 to 50%) to reduce the noise of rainfall.
- The product reduces rainfall noise by 10dB to 15dB.
- Exhibits damping effect within a wide range of temperatures (0-40°C). Stable adherence facilitates work.

Application examples



- Rain noise reduction of air vents.

Structure

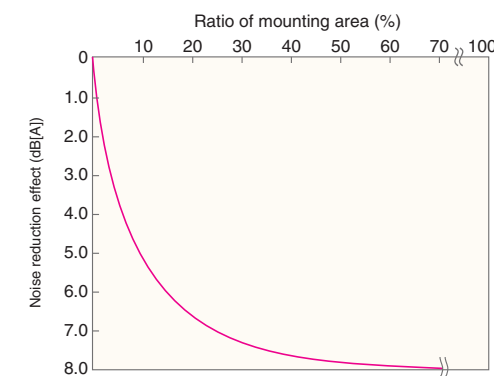


Standard sizes

Thickness (mm)	Weight (kg/m ²)
1.5	2.1

Properties

Relationship between mounting area and noise reduction

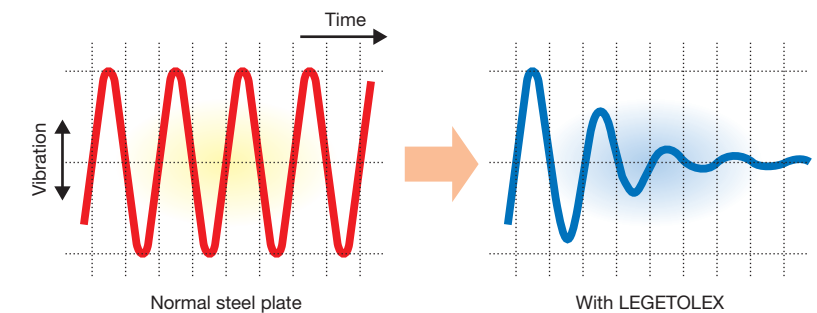


Initial adhesive strength (Substrate: stainless steel plate)

Product No.	Ambient temperature		
	Peel adhesion (N/25mm)		
	0°C	20°C	40°C
D-300N	91.4	59.4	22.1

*Evaluation method: 90° peeling test

Damping effect



Note: ● Noise reduction effect = (noise level before mounting damping material) - (noise level after mounting damping material)
● Ratio of damping material area indicates ratio of damping material mounting area to 400mm x 400mm steel panel

Safety-related Products

Slip prevention tape

Anti-skid Tape (AS-117/AS-127) [outdoor use]



Features

- Tape can be applied to various substrates and surfaces for outdoor use.
- Maintains good slip prevention properties for a long period of time.
- Product line-up includes AS-117 for smooth surfaces and AS-127 for rough surfaces.

Application examples

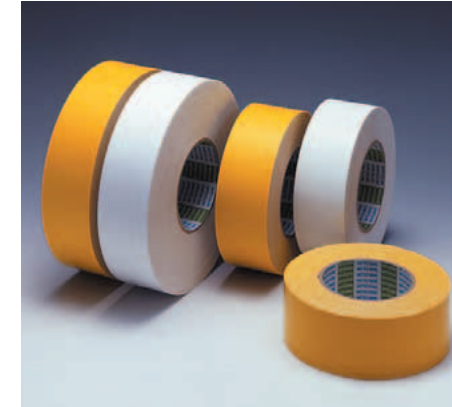


Standard sizes

Thickness (mm)	Width (mm)	Length (m)	Qty/cs (rls)	Color	Structure
1.0	50	5	12	Green, black, yellow, blue, brown, white	Nonskid layer Backing AS-117: Polyester AS-127: Aluminium Acrylic adhesive Release liner
	100		6		
	150		6		
	400		2		

Indicator tape

SOMEN-line Tape [rough surface use]



Features

- As tape uses heavy duty carrier and shows strong adhesion, it can be applied to very rough surfaces and maintains line indication for a long period of time.
- Tape performs perfectly immediately after application.
- It is easy to clean off the dirt from tape surface.

Standard sizes

Thickness (mm)	Width (mm)	Length (m)	Qty/cs (rls)	Colors (JIS safety colors)	Backing
0.91	50	10	16	White, yellow	PVC film (with release liner)
	75		12		
	100		8		

*For other sizes, please contact a Nitto sales representative.

Indicator tape

Line Tape E Series



Features

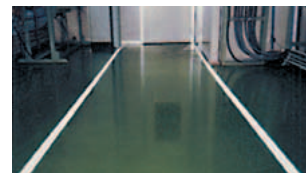
- Uses environment-friendly polyolefin film instead of PVC.
- Contains no harmful heavy metals such as lead.
- No release liner type also available.

Standard sizes

Thickness (mm)	Width (mm)	Length (m)	Qty/cs (rls)	Colors (JIS safety colors)	Backing
0.16*1	50	50	18	White, yellow, red, blue, green, orange*2	Polyolefin-based film
	75		12		
	100		9		

*1 Thickness of E-P is 0.21 mm. *2 Some colors are not offered for some products.

Application examples



Without release liner

Product No.	Type	Core	Packaging
E-SD	For general use (standard type)	Paper	Individual shrink packaging
E-OC	For general use (overcoat type)		
E-CR	For clean rooms (overcoat type)	Polystyrene	Individual shrink packaging & polyethylene bag (with heat sealing)

*Tape surface of OC and CR types resists scratches and dirt. The tape is specially treated so it can be easily wiped off.

With release liner

Product No.	Type	Core	Packaging
E-A	For general use (standard type)	Paper	Individual shrink packaging
E-P	For general use (overlaminated type)		

Petrolatum anti-corrosion tape

No. 59 Series



Features

- Consists of soft nonwoven fabric impregnated with a compound of primarily petrolatum, a substance with strong anti-rust, anti-corrosion, chemical resistant and durability properties.
- Because the tape is flexible and the front and back always offer tackiness, it offers protection from rust and corrosion for odd-shaped pipe parts, steel structures and tanks.

Application examples



Standard sizes

Product No.	Standard sizes	Product No.	Standard sizes
No. 59L	Thickness: 1.1mm, Length: 10m	No. 59 (2.2mm) (thick tape)	Thickness: 2.2mm, Length: 10m, Width: 1,000mm
No. 59H			
No. 59HN (flame retardant)	Width: 50/100/150/200/300mm	No. 59PW (primer)	16kg/can
No. 59HT (heat resistant)		No. 59M (filler)	3kg/block

Outdoor anti-corrosion tape

NITOHULLMAC XG Series



Features

- Developed for preventing corrosion of outdoor steel structures, the tape is highly durable and does not drip oil when hot.
- Easy to work with and can be used for repairs.
- Tight adherence and flexibility enable it to be used as "anti-corrosion tape that can be used like paint."

Application examples



Standard sizes

Product No.	Standard sizes
NITOHULLMAC XG (tape)	Thickness: 1.1mm, Width: (50/100/150/200/300)mm, Length: 10m
NITOHULLMAC XG-PN (primer)	16kg/can
NITOHULLMAC XG-M (filler)	2kg/block
NITOHULLMAC XG-T (coating material)	16kg/can

PVC anti-corrosion tape

No. 51



Features

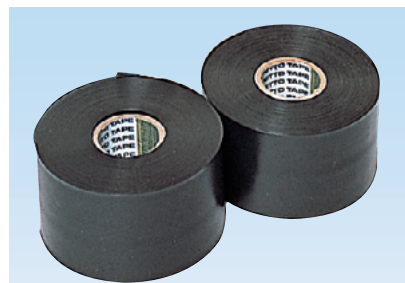
- Offers superior durability and corrosion resistance.
- Consists of flexible film and thick adhesive. Adheres well to joints and curved parts. Provides superior sealing and cushioning.
- The backing is flexible, so it is ideal for work at low temperatures.
- JIS Z 1901 qualified anti-corrosion vinyl tape.
- Designated protective tape for No. 59 anti-corrosion tape for underground pipe in accordance with notification No. 90 regarding hazardous substances issued by the FDMA.

Standard sizes

Backing	Thickness (mm)	Width (mm)	Length (m)	Color (2 colors)
PVC	0.4	25/50/75/100	10	Black, silver-gray

PE anti-corrosion tape

No. 55



Features

- Has superior watertight properties because it is a self-fusing tape with a self-adhesive layer.
- Can be used with protective winding of No. 59 series of petrolatum anti-corrosion tape for underground piping

Standard sizes

Backing	Thickness (mm)	Width (mm)	Length (m)	Color
Polyethylene	0.4	50/100	10	Black

Product Information Contacts

●About Products ●Catalog and Data Sheet Delivery ●Various Available Product Samples ●Practical Evaluations ●Other

Double-coated adhesive tapes

TCAT Tape Customer Assistant Team

Support Products: Double-coated adhesive tape, Metal foil tape
Supported Sample Sizes: A4, specified width (small roll)
TEL: +81-532-41-8400/ +81-532-41-8267 FAX: +81-532-41-8473
E-mail: tcat@nitto.co.jp



Foam sealing materials

TFOX Tape and Foam Expert Support Center

Support Products: Sealing materials (Foam materials, Reinforcing materials, Vibration-damping materials), Waterproof and airproof tapes, Masking tapes for painting, Vinyl tapes, Bar code labels
TEL: +81-532-41-7838 FAX: +81-532-41-8446
E-mail: tfox@nitto.co.jp



Surface protective materials

TDOC Technical Dock (Doctor)

Support Products: Surface protective films, Masking tape for plating
Supported Sample Sizes: Specified width (small roll, approx. 20m)
TEL: +81-532-41-7223 FAX: +81-532-41-8446
E-mail: tdoc@nitto.co.jp



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1-8-5, Hatara-cho, Fukaya, Saitama 366-8521

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