

Cable Securing Solution  
for Solar Power Generation System

Excellent  
salt damage and  
weather resistance

High  
workability

Number of solar panels  
secured with our  
solution:

**Over  
14 million**

Perfect for use in  
coastal areas and  
snowy areas

**Outstanding  
sales record**

as a pioneer in cable ties  
for use in solar power  
system panels



# GalvaLok<sup>®</sup>



## For fastening cables to solar panel base frames



### GalvaLok®

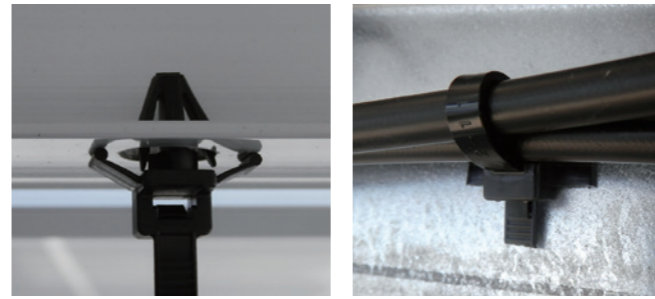
This cable tie is perfect for tying cables to the base frame for solar power panels. Offering excellent weather resistance, this product shows almost no deterioration of its strength even after an accelerated weathering test equivalent to approximately 20 years of weather exposure.\*2 With excellent salt damage resistance and chemical resistance, this product is perfect for use in coastal and snowy areas.

Perfect for use in coastal areas and snowy areas

Allows you to easily and firmly fix cables using holes in the base frames

### GalvaLok Pushmount Tie®

Allows you to easily and firmly fix cables by inserting into holes on the base frames of solar panels. Its made of polyamide 11 which has excellent weather resistance, salt damage resistance, and chemical resistance.



Firmly fixed to the frame hole

### Cable Protection products will protect the wiring in harsh environments

For protection and branching of electric wire covers

### Spiral tube (PA12)

Spiral tube is a wire protection tube that can protect from abrasion and bundle at the same time. Made of polyamide 12, it has excellent weather resistance, calcium chloride resistance, chemical resistance and oil resistance and low-temperature impact resistance.



Protected from damage, just by wrapping on wires.

Because of spiral-shape, ideal for protecting curved parts and branching.

# "Cable Securing Solution" Supporting Solar Power Generation in Japan

HellermannTyton's total solution, including GalvaLok® with its outstanding sales record, secures cables for over 14 million solar panels installed throughout Japan, supporting electric power output of more than 3,500 MW\*1.

\*1 Investigated in Oct., 2015

## Just clipping GalvaLok Edge Clip to the edge of a base frame



Can secure cables easily just by clipping GalvaLok Edge Clip to the edge of a base frame

### GalvaLok® Edge Clip

By simply clipping this product to the edge of a base frame, you can easily secure a GalvaLok cable tie. Its polyamide 11 housing with insulating properties has excellent weather resistance, salt damage resistance, and chemical resistance. Eliminating the need to make holes and tighten screws, this product improves your work efficiency. You can insert GalvaLok cable ties into a GalvaLok Edge Clip from any direction.



Can secure firmly to the mount frame

Can bind the piping of large-diameter, and secure firmly to the rack

Perfect for securing large diameter vertical trunk cables

### EL-TY®

EL-TY® is a reel type cable tie with superior strength that is perfect for securing large diameter vertical trunk cables. This product is made of weatherproof polyacetal, which shows no signs of decreased strength even after an accelerated weathering test equivalent to approximately 20 years of weather exposure.\*2 As it is a reel type cable tie, you can use EL-TY® by cutting it into pieces of any desired length.

Label for displaying destination for cables and pipings

### TABTAG Labels

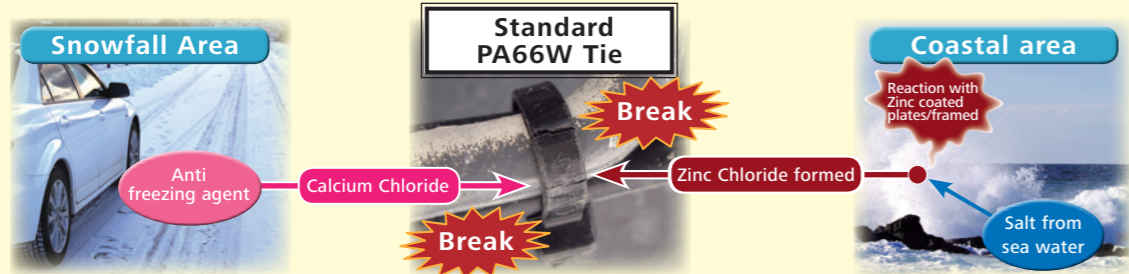
TABTAG Labels are self-laminating labels with outstanding chemical resistance, heat resistance, and durability. When affixed to a cable, the printed part will be laminated as the part will be covered with a transparent sheet. This prevents the label from getting dirty and protects the printed part from water and solvents. Featuring a continuous use temperature range of -40°C to 135°C, TABTAG Labels are also suitable for use in hot environments.



\*2 Caution: The specified data are measured values and are not guaranteed. Note that they are reference data obtained under certain conditions and they do not indicate the durability (service life) in actual use.

## Why are GalvaLok ties necessary?

Most polyamide 66 (PA66) cable ties are affected by zinc chloride, calcium chloride, and other chemical substances (corrosive agents). Polyamide 66 cable ties have low resistance to certain chemical substances and may deteriorate or break when solvent cracking occurs\*.



When the zinc of a zinc coated steel sheet and the salt in seawater react, zinc chloride is generated, which causes a polyamide 66 cable tie to deteriorate and break in a short time. Calcium chloride, the main ingredient in snow-melting and de-icing agents used in snowy areas and mountainous areas, also causes polyamide 66 cable ties to deteriorate and break.

### Risk of solvent cracking

\*Solvent cracking

A phenomenon called environmental stress cracking or chemical cracking that causes a plastic material to generate cracks when a chemical substance penetrates into the plastic.

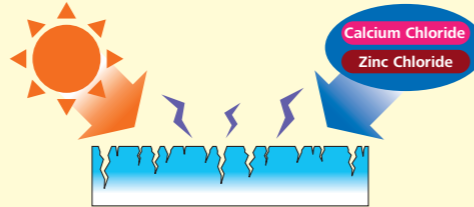
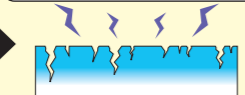
There are two main reasons for polyamide 66 cable ties breaking: solvent cracking due to the effect of salt damage and breaking because of the deterioration of their weather resistance due to ultraviolet rays.

Zinc chloride or calcium chloride contained in water penetrates into polyamide.

The penetrating chemical substance bonds with the polyamide molecules, which causes the surface layer of the plastic to distort, generating cracks.

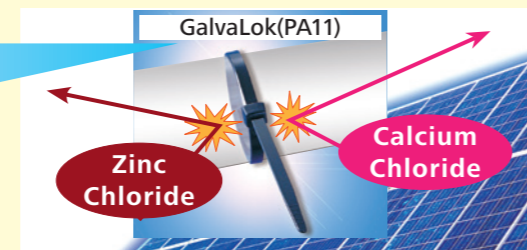
The cable tie slowly deteriorates and breaks

The cable tie relatively rapidly deteriorates and breaks



## GalvaLok is Promising!!

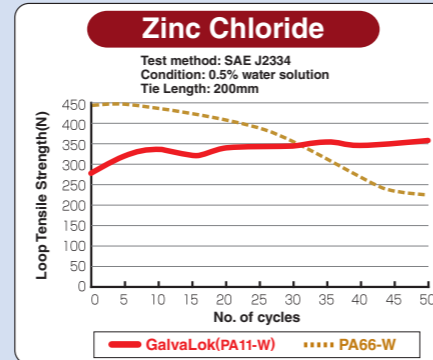
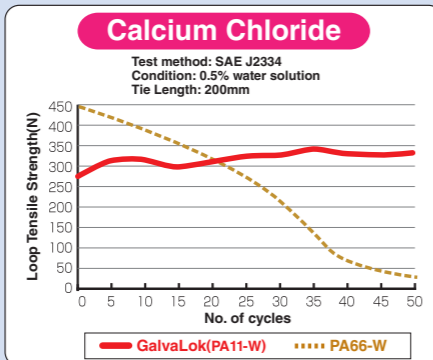
GalvaLok, which is made of polyamide11(PA11), will maintain its strength for a long period of time without being affected by corrosion organisms such as calcium chloride and zinc chloride.



### Salt damage resistance: Combined cycle test

While the strength of a conventional polyamide 66 cable tie dropped sharply, GalvaLok maintained its initial strength, demonstrating excellent salt damage resistance.

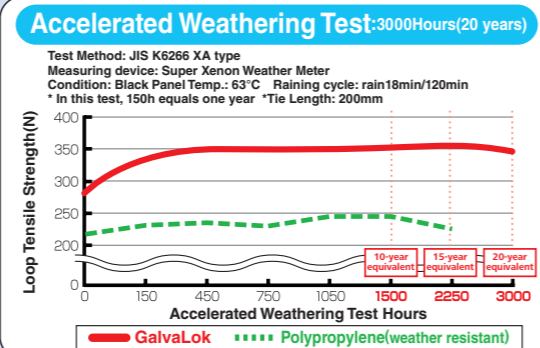
Generally, the salt damage resistance / corrosion resistance evaluation performed by a combined cycle test is considered to be the closest to use in an actual outdoor environment in coastal areas.



### Accelerated weathering test

GalvaLok showed almost no deterioration of strength even after an accelerated weathering test equivalent to approximately 20 years of weather exposure.

GalvaLok has exceedingly superior mechanical strength and weather resistance compared to polypropylene cable ties with the same salt damage resistance as polyamide 11 GalvaLok.



Caution: The specified data are measured values and are not guaranteed. Note that they are reference data obtained under certain conditions and they do not indicate the durability (service life) in actual use.

## GalvaLok®

Weather Resistant • Heat Stabilized • Chemical Resistant

High Temperature, Indoor & Outdoor Use

Color Black

Material PA11

UL Flame Retardant (Raw Material) UL94HB

Operating Temp. -40°C~+105°C

RoHS

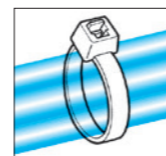
HF



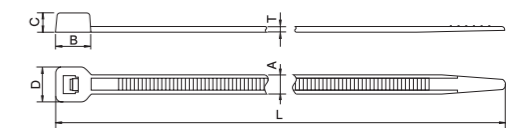
GalvaLok® is a cable tie that has excellent weather resistance, salt damage resistance, and mechanical strength, making it perfect for cabling work around solar panel base frames and galvanized steel plates.

- Cabling work for solar panels
- Measures against salt damage
- Cabling work around galvanized steel plates installed outside
- Protection from calcium chloride contained in snow-melting and de-icing agents
- The salt damage resistance performance has been verified by a combined cycle test, which comes the closest to the real environment.
- Demonstrated almost no deterioration of strength even after an accelerated weathering test equivalent to approximately 20 years of exposure to the elements.

### Standard Ties

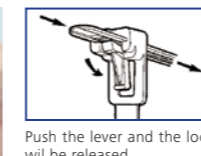


The numbers used in the part number indicate lengths of the tie as a guide.

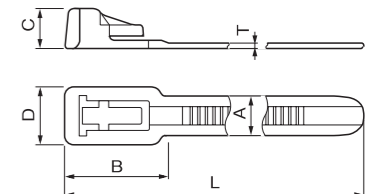


Article-No.	Part.No	Bundle Diameter φ(mm)	Dimensions(mm)						Min.Tensile Strength N (kgf)	Package Qty.(psc)	
			Length L	Width A	B	C	D	T		Bag	Box
111-01565	GL100	1.0~22.0	100	2.5	4.8	3.5	4.8	1.1	80 (8.16)	100	30,000
111-01546	GL150	1.5~36.0	153	3.5	6.4	4.4	6.5	1.2	130 (13.26)	100	20,000
111-01264	GL200	1.5~50.0	202	4.7	6.8	5.9	7.8	1.3	200 (20.39)	100	5,000
111-01265	GL250	1.5~65.0	252	4.8	9.0	5.0	8.8	1.5	250 (25.49)	100	5,000
111-01266	GL300	7.0~80.0	301	4.8	9.0	5.0	8.8	1.5	250 (25.49)	100	5,000
111-01641	GL380	7.0~105	383	4.8	8.5	6.0	8.8	1.5	200 (20.39)	100	5,000
111-02052	GL460	15.0~130	465	9.6	14.5	9.5	14.7	2.2	480 (48.95)	25	750
111-02053	GL600	15.0~175	605	9.6	14.5	9.5	14.7	2.2	480 (48.95)	25	750

### GalvaLok Repeat Tie(Releasable Type)

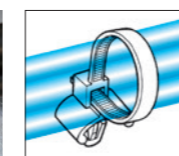


With this product, you can release the lock by pressing the lever after tying the cable. It saves you money because you can use it over and over again. Use this product when you want to remove the cable after routing wires and then tie it again.

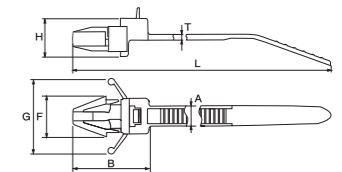


Article-No.	Part.No	Bundle Dia φ(mm)		Dimensions(mm)						Min.Tensile Strength N (kgf)	Package Qty.(psc)	
		Min	Max	Length L	Width A	B	C	D	T		Bag	Box
115-00109	ECO250RF-W	2.5	72.0	250	7.4	19.0	7.8	11.0	1.2	200 (20.39)	100	5,000

### GalvaLok Pushmount tie



Just by inserting his product to hole of solar panel base frame, you can easily secure cables. Its polyamide 11 housing with insulating properties has excellent weather resistance, salt damage resistance, and chemical resistance.



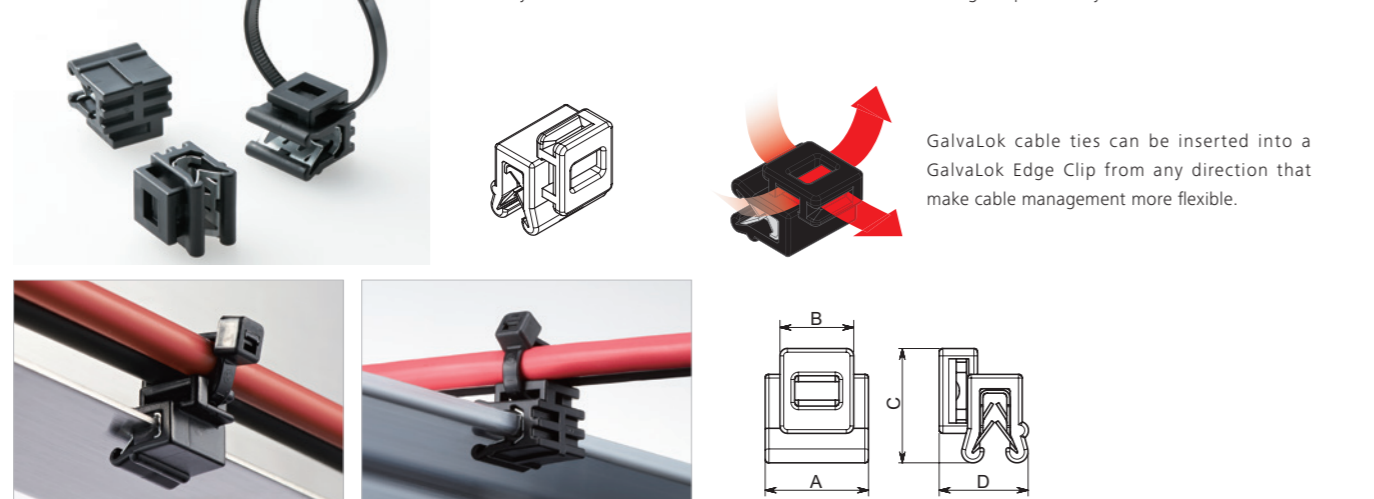
Article-No.	Part.No	Bundle Dia φ(mm)		Dimensions(mm)						Panel Thickness(MAX) (mm)	Panel Hole φ(mm)	Min.Tensile Strength N (kgf)	Package Qty.(psc)		
		Min	Max	Length L	Width A	B	F	G	H				T	Bag	Box
126-00139	GLRT50RSF	1.5	48.0	201	4.8	18.4	9.6	18.0	9.2	1.3	2.6	6.0-7.5	200 (20.39)	100	5,000

## GalvaLok® Edge Clip

Weather Resistant • Heat Stabilized • Chemical Resistant High Temperature, Indoor & Outdoor Use

Color **Black** Material **PA11** Material used for the clip pawl section **C75S steel, zinc based coating** **RoHS** **HF**  
 UL Flame Retardant (Raw Material) **UL94HB** Operating Temp. **-40°C~+105°C**

By simply clipping this product to the edge of a base frame, you can easily secure a GalvaLok cable tie. Its polyamide 11 housing with insulating properties has excellent weather resistance, salt damage resistance, and chemical resistance. Eliminating the need to make holes and tighten screws, this product improves your work efficiency. You can insert GalvaLok cable ties into a GalvaLok Edge Clip from any direction.



Article-No.	Part No.	Applicable GalvaLok Ties	Dimensions(mm)				Panel Thickness(mm)	Package Qty.(pcs)	
			A	B	C	D		Bag	Box
151-01181	<b>GLEC5-S</b>	GL100~GL300	14.0	10.0	15.5	12.0	1.0 ~ 3.0	100	10,000
151-01590	<b>GLEC1640-S</b>	GL100~GL380	15.0	11.0	15.0	13.3	1.6 ~ 4.0	100	5,000

\*To use GalvaLok Edge Clip, you need to use HellermannTyton's GalvaLok or INSULOK ties.  
 \*Be careful not to bundle too many lines together as it may cause the clip to fall off due to the excessively large load.  
 \*When installing GalvaLok Edge Clip, be sure to insert the end far enough that it catches on the panel.

## GalvaLok® Push Mount

Weather Resistant • Heat Stabilized • Chemical Resistant High Temperature, Indoor & Outdoor Use

Color **Black** Material **PA11** UL Flame Retardant (Raw Material) **UL94HB** Operating Temp. **-40°C~+105°C** **RoHS** **HF**

This product is an aligned type that is used by inserting it into a hole in the mount frame, allowing a cable to be fixed stably right above the mounting hole. When used with up to the GL380 size GalvaLok, this product can support small to large diameter cables.



Patent No: 4304060 Registered

Article-No.	Part No.	Applicable GalvaLok Ties	Panel Hole φ(mm)	Panel Thickness(mm)	Package Qty.(pcs)	
					Bag	Box
151-01340	<b>GLPM7</b>	GL100~GL380	6.0~7.5	1.0~2.6	100	10,000

\*Be careful not to bundle too many lines together as it may cause the clip to fall off due to the excessively large load.

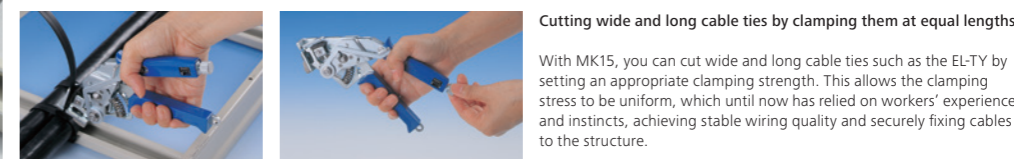
## EL-TY®

Weather Resistant Indoor & Outdoor Use

Color **Black** Material **POM** UL Flame Retardant (Raw Material) **UL94HB** Operating Temp. **-40°C~+105°C** **RoHS** **HF**

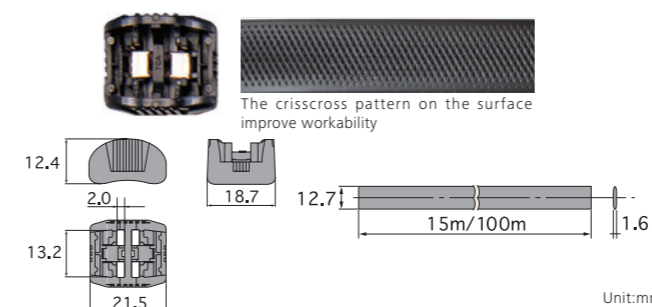
With its superior strength, this reel strap type cable tie is perfect for firmly fixing large diameter trunk cables and pipes. This product is made of waterproof polyacetal, which shows almost no deterioration of strength even after an accelerated weathering test equivalent to approximately 20 years of weather exposure. As this product is a reel strap, you can use it by cutting it into pieces of any desired length.

### Workability increases by using MK15, the EL-TY tensioning tool

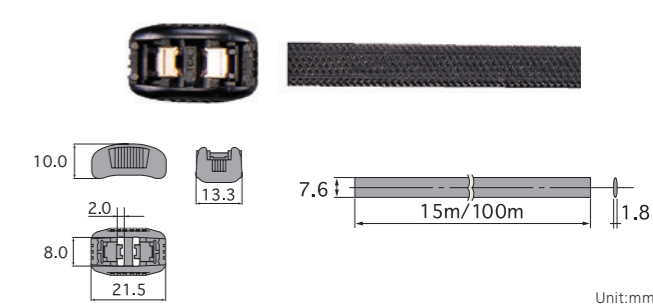


Cutting wide and long cable ties by clamping them at equal lengths  
 With MK15, you can cut wide and long cable ties such as the EL-TY by setting an appropriate clamping strength. This allows the clamping stress to be uniform, which until now has relied on workers' experience and instincts, achieving stable wiring quality and securely fixing cables to the structure.

### EL-TY (Wide width type)



### Small EL-TY (Slim width type)



### Locking Head

Article-No.	Part No.	Min.Tensile Strength N (kgf)	Package Qty.		
			Bag	Small Box	Large Box
111-01450	<b>EL-H3</b>	1,110 (113.19)	25	250	2,500

### Locking Head

Article-No.	Part No.	Min.Tensile Strength N (kgf)	Package Qty.		
			Bag	Small Box	Large Box
111-01451	<b>SEL-H2</b>	780 (79.54)	25	250	2,500

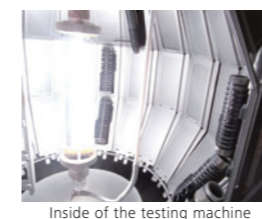
### Reel Strap

Article-No.	Part No.	Package Qty.		
		Reel	Small Box	Large Box
111-01445	<b>EL-R2-15</b>	1(15m)	10	40
111-01444	<b>EL-R2-100</b>	1(100m)	—	5

### Reel Strap

Article-No.	Part No.	Package Qty.		
		Reel	Small Box	Large Box
111-01446	<b>SEL-R1-15</b>	1(15m)	10	40
111-01447	<b>SEL-R1-100</b>	1(100m)	—	5

### Accelerated Weathering Test Method



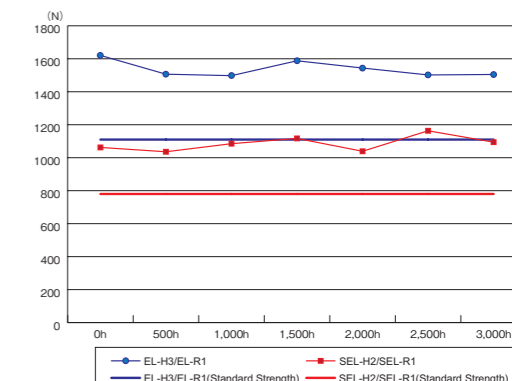
The EL-TY (Weather Resistant Grade) is made mainly of polyacetal(POM) with carbon black (ultraviolet-screening action) added for weather resistance. When left in an outdoor environment, the resin in plastics generally deteriorates due to ultraviolet rays. Carbon black is considered to be the most effective material for blocking ultraviolet rays. At HellermannTyton, we tested the EL-TY (Weather Resistant Grade) using the Super Xenon Weather Meter (accelerated weathering test equipment).

### Test Results

Even after 3,000 hours had passed (equivalent to 20 years), no test items fell off in the test equipment. In addition, the loop tensile strength at each elapsed time showed almost no change from the initial value, maintaining the standard strength. The appearance test did not show any signs of cracking.

### Loop Tensile Strength changes over time (Average)

Test Samples	Unit:N						
	0 h	500 h	1000 h	1500 h (10 years)	2000 h	2500 h	3000 h (20 years)
EL-H3/EL-R1 (4pieces)	1,620.6	1,506.5	1,497.6	1,587.8	1,543.9	1,501.9	1,504.8
SEL-H2/SEL-R1(3pieces)	1,062.3	1,036.0	1,085.0	1,117.0	1,039.0	1,163.3	1,094.3



Caution: The specified data are measured values and are not guaranteed. Note that they are reference data obtained under certain conditions and they do not indicate the durability (service life) in actual use.

## Spiral Tube (PA12)

Weather Resistant

Indoor & Outdoor Use

Color Black

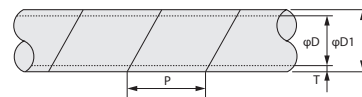
Material PA12

UL Flame Retardant (Raw Material) UL94HB

Operating Temp. -40°C~+65°C



This product is a polymaid 12 spiral tube which both protects electric wires from abrasion and ties them down at the same time. It has superior weather resistance, chemical resistance, oil resistance, and low-temperature impact resistance when compared to conventional polyethylene tubes. Since this product is unaffected by calcium chloride, you can use it in an environment where snow-melting agent may get on the tube. It is also better suited for curved wires and for protecting wire branches.



Article-No.	Part No.	Dimensions(mm)				Package Qty.(PCS)	
		φD	φD1	T	P	Small Box (m/reel)	Large Box
161-06057	<b>TS-13N12-W</b>	11.8	13.8	1.0	12.0	50	2 Small Boxes
161-06058	<b>TS-16N12-W</b>	14.1	16.5	1.2	20.0	50	2 Small Boxes
161-06059	<b>TS-22N12-W</b>	19.4	22.0	1.3	20.0	25	2 Small Boxes

## TABTAG Labels

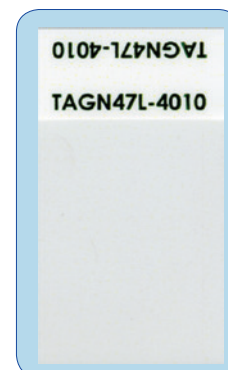
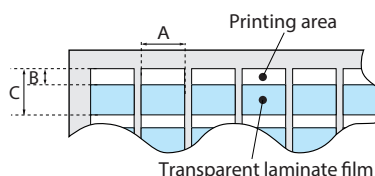
Self-laminating



TABTAG Labels are self-laminating labels with outstanding chemical resistance, heat resistance, and durability. When affixed to an electric wire, the printed part will be covered with a transparent sheet. This prevents the label from getting dirty and protects the printed part from water and solvents.



Laser Printer



**TAGN47L-4010**  
Printing area (label length)  
24.4x11.9 (45.0) mm

Materials	Polyester film
Adhesive material	Acrylic
Operating Temperature	-40°C~ +135°C
Environment	Indoor only
Color of the printing area	White
Thickness	50.0 μm

### Printer Selection

Print quality may differ depending on the performance of the printer and compatibility with the toner (ribbon). Please check the quality with your printer in advance. Please contact our sales office to request samples.

Article-No.	Part No.	Applicable cable Dia. (MAX) φ(mm)	Dimensions(mm)			Size of the sheet	Number of labels columns	Number of labels line	Number of sheets	Package Qty.(Number of Labels)	
			Printing area A	Printing Area B	Label Length C					Bag	Box
594-00015	<b>TAGN47L-4010</b>	10.0	24.4	11.9	45.0	A4	7	6	42	1,050	10,500

\*We have various other types and sizes. For more information, please contact our office.

### Software of TABTAG Labels:

You can edit TABTAG Labels using Label Mighty, label creation software from JUSTSYSTEMS Corporation. By using this software, you can freely design labels with printed letters, serial numbers, photos, illustrations, bar codes, and QR codes, and you can edit the design using spreadsheet files or CSV files.

You can download the format from <http://www.hellermannntyton.co.jp/information/labelmighty.html>

To purchase the Label Mighty software check JUSTSYSTEMS Corporation website.

About Label Mighty <http://www.justsystems.com/jp/label/>

Label Mighty Direct Shops → <https://www.justmyshop.com/products/label/>

Label Mighty Distributors → <http://www.justsystems.com/jp/shop/>

\*Downloading the label formats is not necessary in Label Mighty 7 or later as it already incorporates the formats.

\*We do not sell Label Mighty. For details or to purchase Label Mighty, please contact JUSTSYSTEMS Corporation.

\*JUSTSYSTEMS and Label Mighty are registered trademarks of JUSTSYSTEMS Corporation.



You can download paper format of "TABTAG Label" from our site and not in the software "Label Mighty". Please refer to the left link to purchase "Label Mighty".