

OUR **TAILOR-MADE** SOLUTIONS
FOR YOUR **CABLE AND WIRE MANAGEMENT**



 **SUMAR S.I.**

SUMINISTROS INDUSTRIALES Y NAVALES



ADVANCED FASTENING SOLUTIONS

We **DEVELOP** and **BUILD** solutions dedicated to different types of industry, combining our Italian and European **COMPETENCES**.



PRODUCT CERTIFICATIONS AND COMPLIANCE



DNV

DNV certification guarantees that cable ties comply with the "Det Norske Veritas", "Ger-manischer Lloyd" and DNV rules for classification – Ships, offshore units, and high speed and light craft. Elematic products approved by this certificate are accepted for installation on all vessels classed by DNV.



R.I.NA.

The Italian Naval Register homologation, according to the IEC EN 60092-101 "Electrical installations in ships - Part 101: Definitions and general requirements" and IEC 62275 "Cable management systems - Cable ties for electrical installations"



BUREAU VERITAS

This homologation, according to the IEC 60092 "Electrical installations in ships" - IEC 62275 "Cable management systems - Cable ties for electrical installations", ensures that cable ties comply with the "Bureau Veritas" standard for cables fixing in shipbuilding.



UL LISTED

UL

cable ties are listed by UL (Underwriters Laboratories Inc.) according to UL 62275 standard - Cable Management Systems - Cable Ties for Electrical Installation.



UL

cable ties are listed by UL (Underwriters Laboratories Inc.) according to UL 62275 standard - Cable Management Systems - Cable Ties for Electrical Installation. C-UL mark certified that cable ties are also CSA conforming products



CE MARKING

Our products comply with the Low Voltage Directive 2014/35/EU and the cable ties are tested in accordance with CEI EN IEC 62275 "Cable management system – Cable ties for electrical installations".



CABLE TIES STANDARD

- Vessel's electrical systems are the mainstay of life onboard. The electrical system supplies the starting power for the engine and gensets.
- Without electrical power you aren't going anywhere, as we all need power to operate radio communication equipment, electronics / navigation systems, refrigeration / freezers, navigation lights / interior lighting, electrical powered bilge pumps and more.



STANDARD CABLE TIES

Polyamide 6.6 cable tie for professional applications



FEATURES AND BENEFITS

- Black cable ties in polyamide with special additives guarantee **UV-ray resistance**
- Available in a wide range of sizes

MATERIALS

Material: natural polyamide 6.6
(+2% carbon black for the black version)

Halogen free

Material flammability rating: UL 94-V2

Excellent resistance to: aromatic solvents, oils, greases, oil-based and derivatives.

Good resistance to: bases.

Limited resistance to: acids.

Not resistant to: phenol and chlorinated solvents

Installation temperature: -10°C ÷ 60°C

Operating temperature: -40°C ÷ 85°C

CERTIFICATIONS AND COMPLIANCE



TYPE 2

CE marking: our products comply with the Low Voltage Directive 2014/35/EU and the cable ties are tested in accordance with CEI EN IEC 62275 "Cable management system – Cable ties for electrical installations".



LISTED PRODUCTS - Produits Type 21, File E86244 (reference standard UL 62275)
CSA conforming products



Type Approval Certificate n. ELE466422CS (reference standard IEC 62275, IEC 60092-101: "Electrical installations in ships – Part 101: Definitions and general requirements")



Type Approval Certificate n. TAE00001DU (reference standard IEC 62275; DNV Type Approval)



Certificate of Type Approval n°13190/E0 BV (reference standard: IEC 62275; Bureau Veritas Rules for the Classification of Steel Ships)

EN 45545-2

Tests report n. 1120-1121.1IS0040/21 (reference standard UNI EN 45545-2: "Railway applications - Fire protection on railway vehicles Part 2 – Requirements for fire behaviour of materials and components") referring to codes 53xx black.

STANDARD CABLE TIES

BLACK



Description	Width (mm)	Length* (mm)	max bundle Ø (mm)	Tensile strength (kg)	Tensile strength (N)	Package (pcs)	Code
Standard cable tie 2.5x98	2.5	98	21	8.16	80	100	5303C
Standard cable tie 2.5x98	2.5	98	21	8.16	80	1000	5303
Standard cable tie 2.5x98	2.5	98	21	8.16	80	20000	5303B2
Standard cable tie 2.5x135	2.5	135	32	8.16	80	100	5305C
Standard cable tie 2.5x135	2.5	135	32	8.16	80	1000	5305
Standard cable tie 2.6x160	2.6	160	40	8.16	80	100	5306C
Standard cable tie 2.6x200	2.6	200	51	8.16	80	100	5307C
Standard cable tie 2.6x200	2.6	200	51	8.16	80	1000	5307
Standard cable tie 3.5x140	3.5	140	32	18.36	180	100	5309C
Standard cable tie 3.6x140	3.6	140	32	18.36	180	1000	5309
Standard cable tie 3.5x200	3.5	200	50	18.36	180	100	5314C
Standard cable tie 3.5x200	3.5	200	50	18.36	180	1000	5314
Standard cable tie 3.5x290	3.5	290	79	18.36	180	100	5310C
Standard cable tie 3.5x290	3.5	290	79	18.36	180	500	5310
Standard cable tie 3.5x370	3.5	370	103	18.36	180	100	5308
Standard cable tie 4.5x160	4.5	160	38	22.44	220	100	5311C
Standard cable tie 4.5x160	4.5	160	38	22.44	220	1000	5311
Standard cable tie 4.8x178	4.8	178	45	22.44	220	100	5313C
Standard cable tie 4.8x178	4.8	178	45	22.44	220	1000	5313
Standard cable tie 4.5x200	4.5	200	50	22.44	220	100	5315C
Standard cable tie 4.5x200	4.5	200	50	22.44	220	1000	5315
Standard cable tie 4.8x250	4.8	250	68	22.44	220	100	5316C
Standard cable tie 4.5x290	4.5	290	78	22.44	220	100	5317
Standard cable tie 4.5x360	4.5	360	100	22.44	220	100	5319
Standard cable tie 4.5x390	4.5	390	106	22.44	220	100	5318
Standard cable tie 4.4x430	4.5	430	115	22.44	220	100	5320
Standard cable tie 7.8x180	7.8	180	42	55.08	540	100	5323
Standard cable tie 7.5x240	7.5	240	61	55.08	540	100	5325
Standard cable tie 7.5x300	7.5	300	80	55.08	540	100	5326
Standard cable tie 7.5x365	7.5	365	100	55.08	540	100	5327
Standard cable tie 7.5x450	7.5	450	130	55.08	540	100	5329
Standard cable tie 7.5x540	7.5	540	158	55.08	540	100	5331
Standard cable tie 7.5x750	7.5	750	220	55.08	540	100	5333
Standard cable tie 9.0x780	9	780	233	71.40	700	100	5334
Standard cable tie 12.5x225	12.5	225	57	110	1080	50	5335
Standard cable tie 12.5x500	12.5	500	143	110	1080	50	5337
Standard cable tie 12.5x720	12.5	720	213	110	1080	50	5339
Standard cable tie 12.5x850	12.5	850	255	110	1080	50	5341
Standard cable tie 12.5x1.000	12.5	1000	302	110	1080	50	5343

STANDARD CABLE TIES

NATURAL



Description	Width (mm)	Length* (mm)	max bundle Ø (mm)	Tensile strength (kg)	Tensile strength (N)	Package (pcs)	Code
Standard cable tie 2.5x98	2.5	98	21	8.16	80	100	5203C
Standard cable tie 2.5x98	2.5	98	21	8.16	80	1000	5203
Standard cable tie 2.5x98	2.5	98	21	8.16	80	20000	5203B2
Standard cable tie 2.5x135	2.5	135	32	8.16	80	100	5205C
Standard cable tie 2.5x135	2.5	135	32	8.16	80	1000	5205
Standard cable tie 2.6x160	2.6	160	40	8.16	80	100	5206C
Standard cable tie 2.6x200	2.6	200	51	8.16	80	100	5207C
Standard cable tie 2.6x200	2.6	200	51	8.16	80	1000	5207
Standard cable tie 3.5x140	3.5	140	32	18.36	180	100	5209C
Standard cable tie 3.6x140	3.6	140	32	18.36	180	1000	5209
Standard cable tie 3.5x200	3.5	200	50	18.36	180	100	5214C
Standard cable tie 3.5x200	3.5	200	50	18.36	180	1000	5214
Standard cable tie 3.5x290	3.5	290	79	18.36	180	100	5210C
Standard cable tie 3.5x290	3.5	290	79	18.36	180	500	5210
Standard cable tie 3.5x370	3.5	370	103	18.36	180	100	5208
Standard cable tie 4.5x160	4.5	160	38	22.44	220	100	5211C
Standard cable tie 4.5x160	4.5	160	38	22.44	220	1000	5211
Standard cable tie 4.8x178	4.8	178	45	22.44	220	100	5213C
Standard cable tie 4.8x178	4.8	178	45	22.44	220	1000	5213
Standard cable tie 4.5x200	4.5	200	50	22.44	220	100	5215C
Standard cable tie 4.5x200	4.5	200	50	22.44	220	1000	5215
Standard cable tie 4.8x250	4.8	250	68	22.44	220	100	5216C
Standard cable tie 4.5x290	4.5	290	78	22.44	220	100	5217
Standard cable tie 4.5x360	4.5	360	100	22.44	220	100	5219
Standard cable tie 4.5x390	4.5	390	106	22.44	220	100	5218
Standard cable tie 4.4x430	4.5	430	115	22.44	220	100	5220
Standard cable tie 7.8x180	7.8	180	42	55.08	540	100	5223
Standard cable tie 7.5x240	7.5	240	61	55.08	540	100	5225
Standard cable tie 7.5x300	7.5	300	80	55.08	540	100	5226
Standard cable tie 7.5x365	7.5	365	100	55.08	540	100	5227
Standard cable tie 7.5x450	7.5	450	130	55.08	540	100	5229
Standard cable tie 7.5x540	7.5	540	158	55.08	540	100	5231
Standard cable tie 7.5x750	7.5	750	220	55.08	540	100	5233
Standard cable tie 9.0x780	9	780	233	71.4	700	100	5234
Standard cable tie 12.5x225	12.5	225	57	110	1080	50	5235
Standard cable tie 12.5x500	12.5	500	143	110	1080	50	5237
Standard cable tie 12.5x720	12.5	720	213	110	1080	50	5239
Standard cable tie 12.5x850	12.5	850	255	110	1080	50	5241
Standard cable tie 12.5x1.000	12.5	1000	302	110	1080	50	5243

SUPER UV-RESISTANT CABLE TIES

Technical cable ties, in polyamide 6.6 uv-resistant, suitable for outdoor applications



CERTIFICATIONS AND COMPLIANCE



HALOGEN FREE

TYPE 2

CE marking: our products comply with the Low Voltage Directive 2014/35/EU and the cable ties are tested in accordance with CEI EN IEC 62275 "Cable management system – Cable ties for electrical installations".

FEATURES AND BENEFITS

- Excellent resistance to ultraviolet radiation
- Also suitable for installations at high operating temperatures (up to 105°C)

MATERIALS

Material: polyamide 6.6 black UV stabilized + heat stabilized
Halogen free

Material flammability rating: UL 94-V2

High resistance to UV rays

Excellent resistance to: aromatic solvents, oils, greases and derivatives

Good resistance to: bases

Limited resistance to: acids

Not resistant to: phenols and to chlorinated solvents

Installation temperature: -10°C ÷ 60°C

Working temperature: -40°C ÷ 105°C



LISTED PRODUCTS - Produits Type 21, File E86244 (reference standard UL 62275)
CSA conforming products



Type Approval Certificate n. TAE00001DU (reference standard IEC 62275; DNV Type Approval)



Certificate of Type Approval n°13190/E0 BV (reference standard: IEC 62275; Bureau Veritas Rules for the Classification of Steel Ships)

EN 45545-2

Tests report n.
1431-1342.1IS0040/24
(reference standard
UNI EN 45545-2: "Railway applications - Fire protection on railway vehicles Part 2 – Requirements for fire behaviour of materials and components")

SUPER UV-RESISTANT BLACK



Description	Width (mm)	Length (mm)	Ø bundle min (mm)	Ø bundle max (mm)	Tensile Strength (N)	Pack (pcs.)	Code
UV-resistant cable tie 2,5x98	2,5	98	1	21	80	100	5303CUV
UV-resistant cable tie 2,6x200	2,6	200	2	51	80	100	5307CUV
UV-resistant cable tie 3,6x140	3,6	140	2	32	180	100	5309CUV
UV-resistant cable tie 3,6x200	3,6	200	3	50	180	100	5314CUV
UV-resistant cable tie 4,5x200	4,5	200	3	50	220	100	5315CUV
UV-resistant cable tie 4,8x290	4,8	290	3,5	78	220	100	5317UV
UV-resistant cable tie 4,5x360	4,8	360	3,5	100	220	100	5319UV
UV-resistant cable tie 4,5x390	4,5	390	3,5	106	220	100	5318UV
UV-resistant cable tie 7,8x180	7,8	180	3,5	42	540	100	5323UV
UV-resistant cable tie 7,5x365	7,5	365	8	100	540	100	5327UV
UV-resistant cable tie 7,5x540	7,5	540	35	158	540	100	5331UV
UV-resistant cable tie 7,5x750	7,5	750	35	220	540	100	5333UV
UV-resistant cable tie 12,5x500	12,5	500	30	143	1080	50	5337UV

2-LOCK

THE ONLY
**DOUBLE STEEL
TOOTH** CABLE TIE



EN 45545-2

+ MAXIMUM GRIP

**+ SAFETY AND
RELIABILITY**

**+ RESISTANT TO UV
RAYS AND LOW
TEMPERATURES**

**+ INNOVATION AND
EXCLUSIVITY**



PA 6.6



PA 6.6

SUPER UV

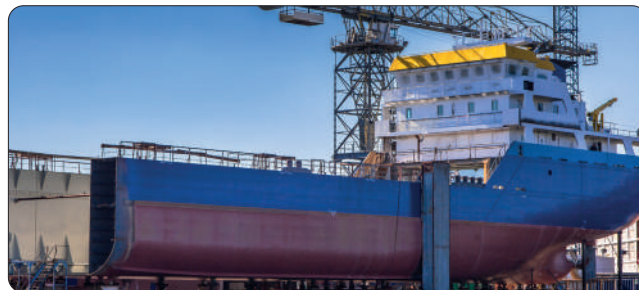
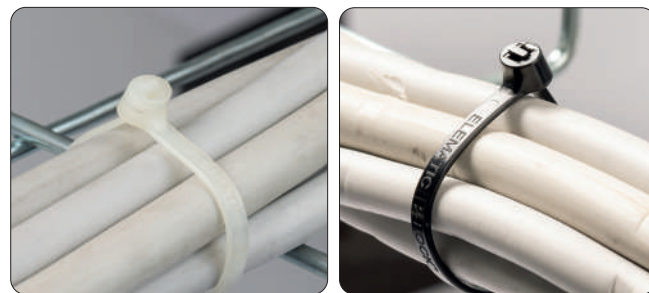


PA 6.6

V0

2-LOCK CABLE TIES

Professional cable ties, in polyamide 6.6, having an innovative double locking system in stainless steel: maximum performance and reliability



FEATURES AND BENEFITS

- The special AISI 316 stainless steel locking system, directly incorporated into the head during the injection manufacturing process, allows the highest performances and reliability
- The double tooth mechanism allows a double locking, on both side of ties, for an ultimate tightening of the bundles
- Perfect wiring: the smooth profile without racks offers infinite adjustment along the length of the tie and always a correct tensioning for any bundling diameters
- Resistance and reliability at low operating temperature up to -40 °C
- **2-LOCK™** cable ties, in black color, are manufactured of special UV-resistant polyamide, for extreme outdoor applications

MATERIALS

Material: polyamide 6.6 natural and black UV stabilized

Halogen free

Material flammability rating: UL 94-V2

Locking system: cage with double tooth in stainless steel AISI 316

UV resistant: black version

Excellent resistance to: aromatic solvents, oils, greases and derivatives

Good resistance to: bases

Limited resistance to: acids

Not resistant to: phenols and to chlorinated solvents

For Black version

Installation temperature: -40°C ÷ 60°C

Working temperature: -40°C ÷ 105°C*

For Natural version

Installation temperature: -40°C ÷ 60°C

Working temperature: -40°C ÷ 85°C

* Pending

CERTIFICATIONS AND COMPLIANCE



Width 2,5 and 3,5 mm: Type 1

Width 4,5 and 7,5 mm: Type 2



RECOGNIZED PRODUCTS - Products Type 11
Width 2,5 e 3,5 mm, File E86244 (reference standard UL 62275)



LISTED PRODUCTS - Products Type 21
Width 4,5 and 7,5 mm, File E86244 (reference standard UL 62275)



LISTED PRODUCTS - Produits Type 21, File E86244 (reference standard UL 62275)
CSA conforming products



Type Approval Certificate ELE486822CS
(reference standard IEC 62275, UL 62275, IEC 60092-10: "Electrical installations in ships - Part 101: Definitions and general requirements")



Type Approval Certificate n. TAE000000G
(reference standard IEC 62275; DNV Type Approval)

EN 45545-2

Tests report n.
0019/DC/TOX/20 and 0185/DC REA/20
(reference standard UNI EN 45545-2:
"Railway applications - Fire protection on
railway vehicles Part 2 - Requirements
for fire behaviour of materials and
components")

2-LOCK™ NATURAL



Description	Width (mm)	Length (mm)	Ø bundle max (mm)	Tensile Strength (kg)	Tensile Strength (N)	Pack (pcs.)	Code
2-LOCK 3,5x140	3,5	140	35	25,5	250	100	1209
2-LOCK 3,5x205	3,5	205	50	25,5	250	100	1214
2-LOCK 3,5x295	3,5	295	80	25,5	250	100	1210
2-LOCK 4,5x200	4,5	200	50	36,72	360	100	1215
2-LOCK 4,5x255	4,5	255	68	36,72	360	100	1216
2-LOCK 4,5x290	4,5	290	80	36,72	360	100	1217
2-LOCK 4,5x365	4,5	365	101	36,72	360	100	1219
2-LOCK 7,5x220	7,5	220	55	79,56	780	100	1225
2-LOCK 7,5x360	7,5	360	100	79,56	780	100	1227

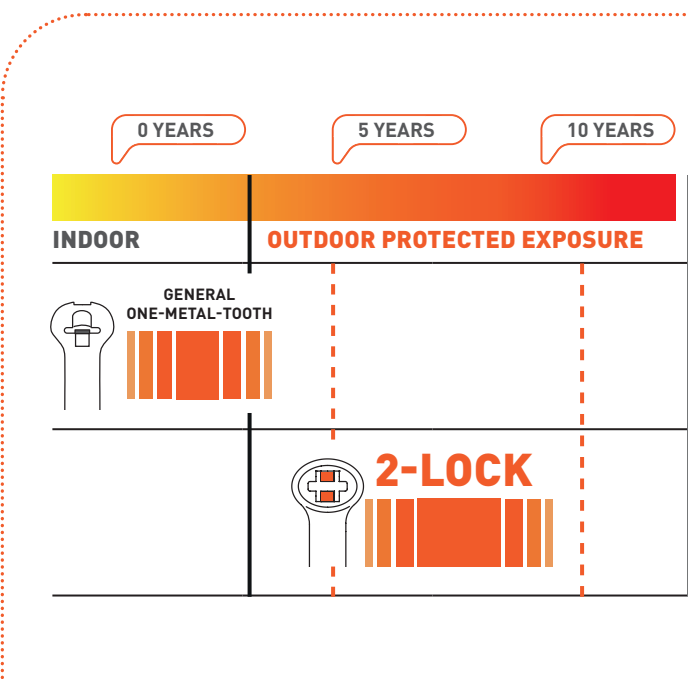
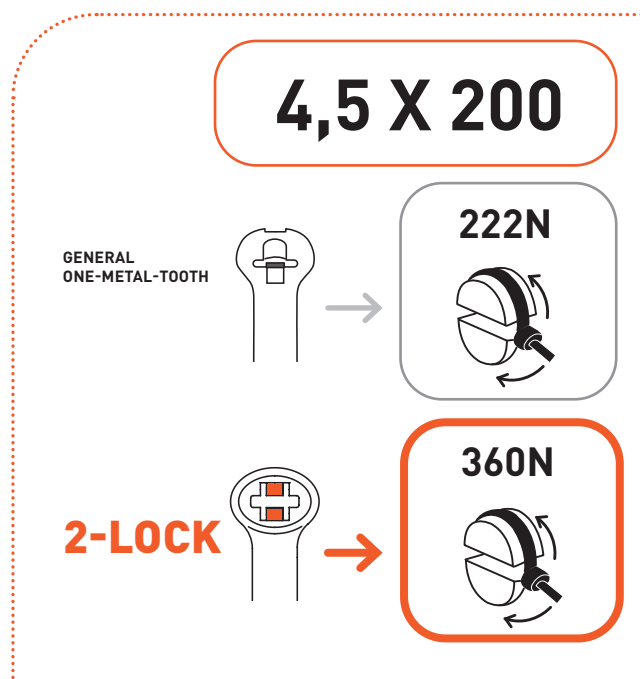
2-LOCK™ BLACK - UV-RESISTANT



Description	Width (mm)	Length (mm)	Ø bundle max (mm)	Tensile Strength (kg)	Tensile Strength (N)	Pack (pcs.)	Code
2-LOCK 3,5x140	3,5	140	35	25,5	250	100	1309
2-LOCK 3,5x205	3,5	205	50	25,5	250	100	1314
2-LOCK 3,5x295	3,5	295	80	25,5	250	100	1310
2-LOCK 4,5x200	4,5	200	50	36,72	360	100	1315
2-LOCK 4,5x255	4,5	255	68	36,72	360	100	1316
2-LOCK 4,5x290	4,5	290	80	36,72	360	100	1317
2-LOCK 4,5x365	4,5	365	101	36,72	360	100	1319
2-LOCK 7,5x220	7,5	220	55	79,56	780	100	1325
2-LOCK 7,5x360	7,5	360	100	79,56	780	100	1327

DOWNSIZING PERFORMANCE

SUPER UV RESISTANCE



E-LOCK

The **NEW**
professional installation tool:
**PERFORMANCE, ERGONOMICS,
DURABILITY.**



Description	Max. cable tie width (mm)	Tensioning Max (N)	Code
E-LOCK V1	4.8	165	566154

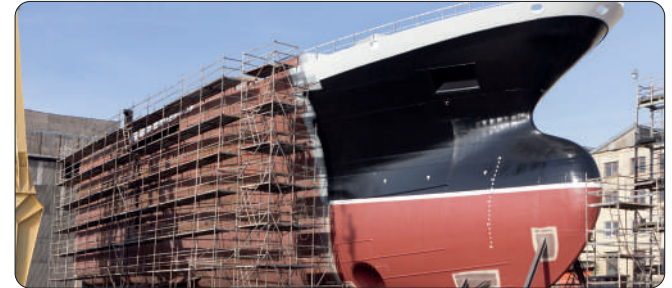
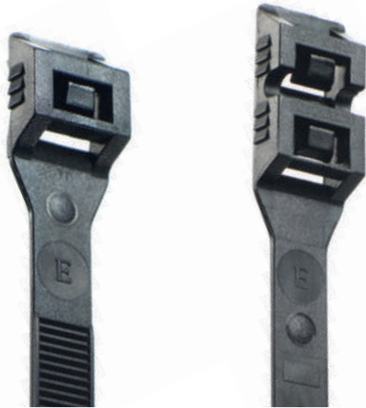
**Best result with our high-performance
2-lock cable ties!**





EASY BELTURING

Outside serrated cable ties with low profile head and manufactured with UV-resistant polymer. Tool-free installation.



FEATURES AND BENEFITS

- Easy insertion with low effort: maximum installation speed and important time saving
- Easy Belturing cableties can be installed without any tool: ideal for overhead lines or when working in difficult positions
- High resistance to ultraviolet radiation and in outdoor exposure conditions
- The external rack and the parallel locking system offer a smooth surface to the fastened cables avoiding any damages to the insulation
- Easy installation even at very low temperatures up to -30° C
- Temporary locking position allows re-opening of the ties for addition or removal of cables

MATERIALS

Material: techno-polymer black UV stabilized and weather resistant

Halogen free

Material flammability rating: UL 94-HB

Excellent resistance to: aromatic solvents, oils, greases and derivatives

Good resistance to: bases

Limited resistance to: acids

Not resistant to: phenols and to chlorinated solvents

Installation temperature: -30°C ÷ 60°C

Working temperature: -40°C ÷ 85°C

LAYING INSTRUCTIONS



CERTIFICATIONS AND COMPLIANCE



TYPE 1

HALOGEN FREE

CE marking: our products comply with the Low Voltage Directive 2014/35/EU and the cable ties are tested in accordance with CEI EN IEC 62275 "Cable management system – Cable ties for electrical installations".

Type 1



TAE00001DU

Type Approval Certificate n. TAE00001DU (reference standard IEC 62275; DNV Type Approval)



Certificate of Type Approval n°13190/E0 BV (reference standard: IEC 62275; Bureau Veritas Rules for the Classification of Steel Ships)

EASY BELTURING

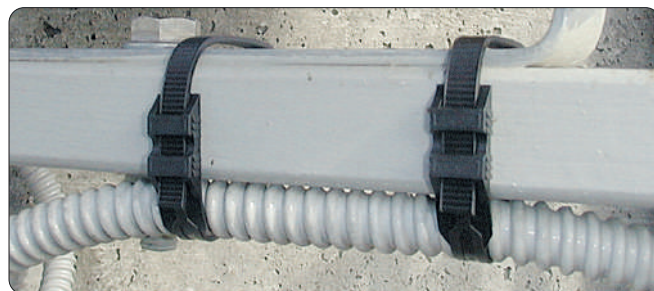
BLACK - UV-RESISTANT



Description	Width (mm)	Length (mm)	Ø bundle min (mm)	Ø bundle max (mm)	Tensile Strength (N)	Pack (pcs.)	Code
Easy belturing 8,8x180 single head	8,8	180	10	38	390	100	6551
Easy belturing 8,8x270 double head	8,8	270	25	63	560	100	6553
Easy belturing 8,8x360 double head	8,8	360	25	93	560	100	6555

BELTURING PLUS

Outside serrated cable ties with low profile head and manufactured with UV-resistant polymer.



LAYING INSTRUCTIONS



FEATURES AND BENEFITS

- High resistance to ultraviolet radiation and in outdoor conditions with significant thermal excursion
- The external rack and the parallel locking system offer a smooth surface to the fastened cables avoiding any damages to the insulation
- Temporary locking position allows re-opening of the ties for addition or removal of cable

MATERIALS

Material: techno-polymer black UV stabilized/ weather resistant

Halogen free

Material flammability rating: UL 94-HB

Excellent resistance to: aromatic solvents, oils, greases and derivatives

Good resistance to: bases

Limited resistance to: acids

Not resistant to: phenols and to chlorinated solvents

Installation temperature: -30°C ÷ 60°C

Working temperature: -40°C ÷ 85°C

Suitable for outdoor application

CERTIFICATIONS AND COMPLIANCE



TYPE 1

HALOGEN FREE

CE marking: our products comply with the Low Voltage Directive 2014/35/EU and the cable ties are tested in accordance with CEI EN IEC 62275 "Cable management system – Cable ties for electrical installations".

Type 1



TAE00001DU

Type Approval Certificate n. TAE00001DU (reference standard IEC 62275; DNV Type Approval)



Certificate of Type Approval n°13190/E0 BV (reference standard: IEC 62275; Bureau Veritas Rules for the Classification of Steel Ships)

BELTURING PLUS SINGLE HEAD



Description	Width (mm)	Length (mm)	Ø bundle min (mm)	Ø bundle max (mm)	Tensile Strength (N)	Pack (pcs.)	Code
Belturing plus 6x180	6	180	9	45	280	100	6450X
Belturing plus 9x180	9	180	10	40	390	100	6451X

BELTURING PLUS DOUBLE HEAD



Description	Width (mm)	Length (mm)	Ø bundle min (mm)	Ø bundle max (mm)	Tensile Strength (N)	Pack (pcs.)	Code
Belturing plus 9x260	9	260	26	60	540	100	6453X
Belturing plus 9x360	9	360	26	93	540	100	6455X
Belturing plus 9x510	9	510	70	140	540	100	6456X
Belturing plus 9x760	9	760	70	220	540	100	6457X

SELF-EXTINGUISHING CABLE TIES

Self-extinguishing cable ties, in polyamide V0, for higher fire protection. Halogen and phosphorus free



FEATURES AND BENEFITS

- Manufactured in self-extinguish polyamide with extremely low toxic gas emission in fire situations
- Good flammability behaviour

MATERIALS

Material: polyamide 6.6 with additives

Halogen free

Humidity absorption (50% relative humidity): 2,7%

Working temperature: -40°C ÷ +85°C

Installation temperature: -5°C ÷ 60°C

Flammability rating: UL94 class V2

Resistance external agents:

Excellent flammability behaviour (UL94 V0). Excellent chemical resistance to aromatic solvents, oils, greases, oil-based products. Good chemical resistance to bases. Limited resistance to acids. Does not resist to phenol and chlorinated solvents.



CERTIFICATIONS AND COMPLIANCE



TYPE 1

HALOGEN FREE

CE marking: our products comply with the Low Voltage Directive 2014/35/EU and the cable ties are tested in accordance with CEI EN IEC 62275 "Cable management system – Cable ties for electrical installations".

Type 1



TAE000000G

Type Approval Certificate n. TAE00001DU (reference standard IEC 62275; DNV Type Approval)



Certificate of Type Approval n°13190/E0 BV (reference standard: IEC 62275; Bureau Veritas Rules for the Classification of Steel Ships)

Tests report n. 1116-1117.1IS0040/21 (reference standard UNI EN 45545-2: "Railway applications - Fire protection on railway vehicles Part 2 – Requirements for fire behaviour of materials and components")

EN 45545-2

SELF-EXTINGUISHING CABLE TIE WHITE



Description	Width (mm)	Length (mm)	Ø bundle (mm)	Tensile Strength (kg)	Tensile Strength (N)	Pack (pcs.)	Code
Self-extinguishing cable tie 2,5x98	2,5	98	21	8,16	80	100	5203CV0
Self-extinguishing cable tie 3,5x140	3,5	140	32	18,36	180	100	5209CV0
Self-extinguishing cable tie 3,5x200	3,5	200	50	18,36	180	100	5214CV0
Self-extinguishing cable tie 4,8x200	4,8	200	50	22,44	220	100	5215CV0
Self-extinguishing cable tie 4,5x290	4,5	290	78	22,44	220	100	5217V0
Self-extinguishing cable tie 7,5x365	7,5	365	100	55,08	540	100	5227V0



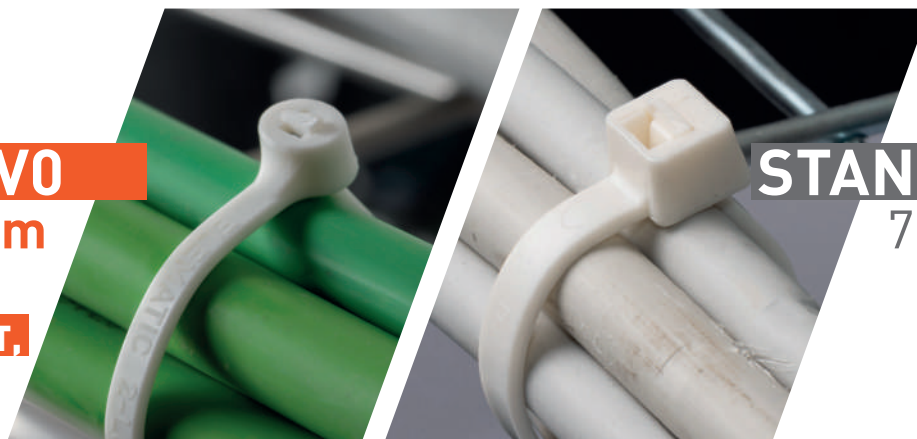
CABLE TIES

2 LOCK-V0

4,5x365 mm

Cod. 1219HRV0

**MORE COMPACT,
SAME TENSILE
STRENGTH**



CABLE TIES

STANDARD V0

7,5x365 mm

ELEMATIC

2-LOCK V0

Cod. 1219HRV0

Size (mm)	Ø max (mm)	Tensile strength (N)
4,5x365	101	540

**THINNER
YET FASTER!**

**MINIMUM DIMENSIONS
MAXIMUM PERFORMANCE**



CABLE TIES

STANDARD V0

Size (mm)	Ø max (mm)	Tensile strength (N)
7,5x365	100	540

2 LOCK V0

Cod. 1219HRV0

**REDUCE SPACE,
MAINTAIN POWER.**

The **2 LOCK V0**
is the perfect solution
for **high performance** in a **compact size**.

- The same strength,
but in a smaller space.
- Less volume, same performance.
- More versatility for applications
in confined spaces without
compromising safety.



SELF-EXTINGUISHING
UL94V0



EASY
to apply

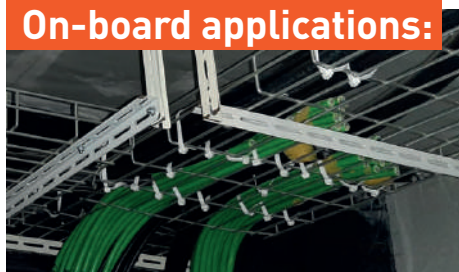


HIGH RESISTANCE
to vibrations



SMOOTH BODY
to prevent damage
to cables

On-board applications:



una foto std v0 e 2 foto con 2-lock v0



FINCANTIERI



HALOGEN FREE

EN 45545-2

COLSTEEL CABLE TIES

Completely AISI 316 - AISI 304 stainless steel cable tie, with high mechanical strength, resistant to the fire and corrosion



FEATURES AND BENEFITS

- Quick installation, by manual tightening and tensioning with the specific tool
- The ball locking mechanism and the smooth surface offer a very low insertion effort and a infinitely calibrated closing adjustment along all the length of the tie
- High mechanical strength: for safety and high performance applications, which can be guaranteed, only with a metal tie
- The total-smooth profiles and surfaces avoid any damage to the insulation of the electrical cables to be bundled
- Fire resistant, suitable for very high operating temperatures
- Available in 304 and also in 316 stainless steel grade for the highest corrosion and chemical resistance

MATERIALS

Material: AISI316 (A4) or AISI304 (A2)

Halogen free

Material flammability rating: not flammable

Resistance to external agents

Outstanding resistance to: acids, oils, greases, chemical, solvents

High resistance to: seawater and corrosive atmosphere

UV resistant: for indoor and outdoor applications

Min. installation temperature: -60°C

Working temperature: -60°C ÷ 300°C

CERTIFICATIONS AND COMPLIANCE



TYPE 2
AISI 316

CE marking: our products comply with the Low Voltage Directive 2014/35/EU and the cable ties are tested in accordance with CEI EN IEC 62275 "Cable management system – Cable ties for electrical installations".



Type Approval Certificate n. TAE00004RD
(reference standard IEC 62275; DNV Type Approval)



TENSIONING TOOL 5407

Automatic tensioning tool for stainless steel cable ties up to 7,9 mm maximum width

COLSTEEL

AISI 304*



Description	Width (mm)	Length (mm)	Ø bundle max (mm)	Tensile Strength (kg)	Tensile Strength (N)	Pack (pcs.)	Code	Recommended tool
Colsteel 4,6x127 - AISI 304	4,6	127	25	45,4	445	100	6701	5407
Colsteel 4,6x201 - AISI 304	4,6	201	51	45,4	445	100	6703	5407
Colsteel 4,6x266 - AISI 304	4,6	266	69	45,4	445	100	6706	5407
Colsteel 4,6x362 - AISI 304	4,6	362	102	45,4	445	100	6708	5407
Colsteel 4,6x521 - AISI 304	4,6	521	152	45,4	445	50	6710	5407
Colsteel 4,6x838 - AISI 304	4,6	838	254	45,4	445	50	6712	5407
Colsteel 7,9x201 - AISI 304	7,9	201	51	113,4	1.112	100	6719	5407
Colsteel 7,9x266 - AISI 304	7,9	266	69	113,4	1.112	100	6720	5407
Colsteel 7,9x362 - AISI 304	7,9	362	102	113,4	1.112	100	6722	5407
Colsteel 7,9x521 - AISI 304	7,9	521	152	113,4	1.112	50	6724	5407
Colsteel 7,9x838 - AISI 304	7,9	838	254	113,4	1.112	50	6726	5407
Colsteel 7,9x1.067 - AISI 304	7,9	1.067	304	113,4	1.112	50	6728	5407

* Not CE Type 2 certified

COLSTEEL

AISI 316



Description	Width (mm)	Length (mm)	Ø bundle max (mm)	Tensile Strength (kg)	Tensile Strength (N)	Pack (pcs.)	Code	Recommended tool
Colsteel 4,6x201 - AISI 316	4,6	201	51	91,8	445	100	6753	5407
Colsteel 4,6x266 - AISI 316	4,6	266	69	91,8	445	100	6756	5407
Colsteel 4,6x362 - AISI 316	4,6	362	102	91,8	445	100	6758	5407
Colsteel 4,6x521 - AISI 316	4,6	521	152	91,8	445	50	6760	5407
Colsteel 7,9x201 - AISI 316	7,9	201	51	204	1.112	100	6769	5407
Colsteel 7,9x266 - AISI 316	7,9	266	69	204	1.112	100	6770	5407
Colsteel 7,9x362 - AISI 316	7,9	362	102	204	1.112	100	6772	5407



TENSIONING TOOL

5407

Description	Length (mm)	Weight (gr)	Tensile Strength (N)	Pack (pcs.)	Code
Stainless steel tensioning tool for ties 7,9 max	178	560	445	1	5407

TWO-WAY MOUNTING BASES

Bi-directional mounts, in ABS material, white or black colour, self-adhesive or for screw fixing



CARACTÉRISTIQUES ET AVANTAGES

- L'adhésif en caoutchouc synthétique assure une adhérence extrêmement rapide, permettant une fixation immédiate des câbles et des tuyaux.
- L'adhésif en acrylate, qui garantit des performances de résistance à l'arrachement très élevées après 24 heures, permet d'utiliser les embases à long terme pour les applications lourdes, même en cas d'exposition à températures élevées

MATERIALS

Mount material: Natural ABS or added with carbon black for the black version

Halogen free

Fire protection: UL 94-HB

Good resistance to: bases, greases

Limited resistance to: acids

Not resistant to: solvents, thinners, oil-based products

CERTIFICATIONS ET CONFORMITÉ



CE marking: our products comply with the Low Voltage Directive 2014/35/EU and the cable ties are tested in accordance with CEI EN IEC 62275 "Cable management system – Cable ties for electrical installations".

Type 1

ADHESIVE PROPERTIES

Type of support	Rubber base - Polyethylene	Acrylic base - Polyurethane
Density	85 Kg/cm ³	320 Kg/cm ³
100 hour static shear adhesion*	0,7 kg/cm ²	0,6 kg/cm ²
Tensile strength	10 kg/cm ²	16,5 kg/cm ²
U.V. Resistance	not recommended	good
Working temperature	-40 °C ÷ 60 °C	-40 °C ÷ 90 °C
Recommended application temperature	18 °C ÷ 35 °C	18 °C ÷ 35 °C
Stocking temperature	18 °C ÷ 30 °C	18 °C ÷ 30 °C
Shelf life	12 months	24 months
Use	immediate application	application after 24h rest

* On degreased and dry galvanized metal surface

MOUNTING BASES ADHESIVITY

Maximum static load recommended	Rubber base adhesive	Acrylic base adhesive
Dimensions 19x19 mm	125 gr	150 gr
Dimensions 27x27 mm	300 gr	300 gr

INSTALLATION INSTRUCTIONS



Clean the surface using an appropriate cleaner and wait until completely dried.



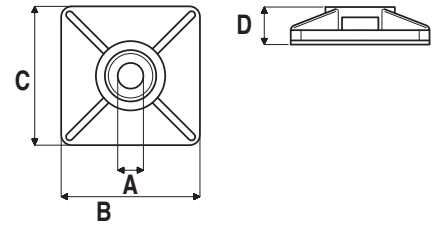
Peel off the protective film avoiding touching the adhesive.



Apply the base on the surface pressing down for few seconds.



For the best results wait time indicated in the technical table.



TWO-WAY MOUNTING BASE WITHOUT ADHESIVE

Description	ø hole (mm)	Length (mm)	Width (mm)	Height (mm)	Tensile Strength (kg)	Tensile Strength (N)	Max. cable tie width (mm)	Color	Pack (pcs.)	Code
	A	B	C	D						
Two-way mounting base 4,8x27x27 natural	4,8	27	27	6,5	18,36	180	4,8	○	100	5472
Two-way mounting base 4,8x27x27 black	4,8	27	27	6,5	18,36	180	4,8	●	100	5474

TWO-WAY MOUNTING BASE WITH RUBBER BASE ADHESIVE

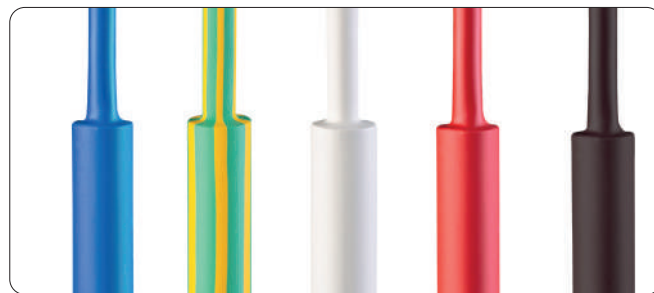
Description	ø hole (mm)	Length (mm)	Width (mm)	Height (mm)	Tensile Strength (kg)	Tensile Strength (N)	Max. cable tie width (mm)	Color	Pack (pcs.)	Code
	A	B	C	D						
Two-way mounting base 4,1x19x19 natural	4,1	19	19	5	10,20	100	3,6	○	100	5467RB
Two-way mounting base 4,1x19x19 black	4,1	19	19	5	10,20	100	3,6	●	100	5469RB
Two-way mounting base 4,8x27x27 natural	4,8	27	27	6,5	18,36	180	4,8	○	100	5473RB
Two-way mounting base 4,8x27x27 black	4,8	27	27	6,5	18,36	180	4,8	●	100	5475RB

TWO-WAY MOUNTING BASE WITH ACRYLIC BASE ADHESIVE

Description	ø hole (mm)	Length (mm)	Width (mm)	Height (mm)	Tensile Strength (kg)	Tensile Strength (N)	Max. cable tie width (mm)	Color	Pack (pcs.)	Code
	A	B	C	D						
Two-way mounting base 4,1x19x19 natural	4,1	19	19	5	10,20	100	3,6	○	100	54673MV
Two-way mounting base 4,1x19x19 black	4,1	19	19	5	10,20	100	3,6	●	100	54693MV
Two-way mounting base 4,8x27x27 natural	4,8	27	27	6,5	18,36	180	4,8	○	100	54733MV
Two-way mounting base 4,8x27x27 black	4,8	27	27	6,5	18,36	180	4,8	●	100	54753MV

ET100

Heat-shrink tube with excellent physical and mechanical characteristics. Self-extinguishing cross-linked polyolefin thin wall tube.



FEATURES AND BENEFITS

- Excellent mechanical and chemical resistance
- Very flexible
- Self-extinguishing UL224
- Broad range of colours

MATERIALS

Shrinking ratio: 2:1

Available diameters: Ø 1.2mm ÷ Ø 101.6mm

Available colours*: black, white, red, blue, transparent, yellow/green

Operating temperature: -55°C ÷ +135°C

Shrinking temperature: > 90°C

Flammability rating: self-extinguishing according to UL224 (except for the transparent version)

Longitudinal withdrawal: -5% ÷ +5%

Dielectric strength: >20kV/mm

*For colours other than black, add the colour code to the item code:
BI = white, BL = blue, R = red, TR = transparent, G/V = yellow/green,
MAR = brown, GR = grey

CERTIFICATIONS AND COMPLIANCE

UL224 125 °C - UL cert.E 228117*

CSA C22.2 N° 198.1-98 OFT*

*except for the transparent version





ET 100 BLACK - REEL

Description	Internal expanded Ø (inch)	Internal expanded Ø (inch)	Internal expanded Ø (mm)	Wall recovered thickness (mm)	Package (m)	Code
ET 100 1.2/0.6	3/64"	1.2	0.6	0.41	200	12203012
ET 100 1.6/0.8	1/16"	1.6	0.8	0.43	200	12203016
ET 100 2.4/1.2	3/32"	2.4	1.2	0.51	200	12203024
ET 100 3.2/1.6	1/8"	3.2	1.6	0.51	200	12203032
ET 100 4.8/2.4	3/16"	4.8	2.4	0.51	200	12203048
ET 100 6.4/3.2	1/4"	6.4	3.2	0.64	150	12203064
ET 100 9.5/4.7	3/8"	9.5	4.7	0.64	150	12203095
ET 100 12.7/6.4	1/2"	12.7	6.4	0.64	100	12203127
ET 100 19.1/9.5	3/4"	19.1	9.5	0.77	50	12203190
ET 100 25.4/12.7	1"	25.4	12.7	0.89	50	12203254
ET 100 38.1/19.1	1 1/2"	38.1	19.1	1.02	25	12203381
ET 100 50.8/25.4	2"	50.8	25.4	1.14	25	12203508
ET 100 76.2/38.1	3"	76.2	38.1	1.27	15	12203762
ET 100 101.6/50.8	4"	101.6	50.8	1.4	15	12203994

For colours other than black, add the colour code to the item code: BI = white, BL = blue, R = red, TR = transparent, G/V = yellow/green, GR = grey



ET 100 BLACK - BOX

Description	Internal expanded Ø (inch)	Internal expanded Ø (inch)	Internal expanded Ø (mm)	Wall recovered thickness (mm)	Package (m)	Code
ET 100 1.2/0.6	3/64"	1.2	0.6	0.41	15	12253012
ET 100 1.6/0.8	1/16"	1.6	0.8	0.43	15	12253016
ET 100 2.4/1.2	3/32"	2.4	1.2	0.51	15	12253024
ET 100 3.2/1.6	1/8"	3.2	1.6	0.51	15	12253032
ET 100 4.8/2.4	3/16"	4.8	2.4	0.51	12	12253048
ET 100 6.4/3.2	1/4"	6.4	3.2	0.64	12	12253064
ET 100 9.5/4.7	3/8"	9.5	4.7	0.64	10	12253095
ET 100 12.7/6.4	1/2"	12.7	6.4	0.64	8	12253127
ET 100 19.1/9.5	3/4"	19.1	9.5	0.77	5	12253190
ET 100 25.4/12.7	1"	25.4	12.7	0.89	3	12253254

For colours other than black, add the colour code to the item code: BI = white, BL = blue, R = red, TR = transparent, G/V = yellow/green

ET 100 BLACK - 1-METER TUBING - BOX



Description	Internal expanded Ø (inch)	Internal expanded Ø (inch)	Internal expanded Ø (mm)	Wall recovered thickness (mm)	Package (m)	Code
ET 100 1.2/0.6	3/64"	1.2	0.6	0.41	30	12273012
ET 100 1.6/0.8	1/16"	1.6	0.8	0.43	30	12273016
ET 100 2.4/1.2	3/32"	2.4	1.2	0.51	30	12273024
ET 100 3.2/1.6	1/8"	3.2	1.6	0.51	30	12273032
ET 100 4.8/2.4	3/16"	4.8	2.4	0.51	24	12273048
ET 100 6.4/3.2	1/4"	6.4	3.2	0.64	24	12273064
ET 100 9.5/4.7	3/8"	9.5	4.7	0.64	20	12273095
ET 100 12.7/6.4	1/2"	12.7	6.4	0.64	16	12273127
ET 100 19.1/9.5	3/4"	19.1	9.5	0.77	10	12273190
ET 100 25.4/12.7	1"	25.4	12.7	0.89	6	12273254
ET 100 38.1/19.1	1 1/2"	38.1	19.1	1.02	4	12273381
ET 100 50.8/25.4	2"	50.8	25.4	1.14	3*	12273508
ET 100 76.2/38.1	3"	76.2	38.1	1.27	3*	12273762
ET 100 101.6/50.8	4"	101.6	50.8	1.4	3*	12273994

*Packed in a plastic bag.

Codes 12273762 and 12273994 available in the black version only.

For colours other than black, add the colour code to the item code: BI = white, BL = blue, R = red, TR = transparent, G/V = yellow/green, MAR = brown, GR = grey



ET 100 YELLOW/GREEN - REEL

Description	Internal expanded Ø (inch)	Internal expanded Ø (inch)	Internal expanded Ø (mm)	Wall recovered thickness (mm)	Package (m)	Code
ET 100 2.4/1.2	3/32"	2.4	1.2	0.51	200	12203024GV
ET 100 3.2/1.6	1/8"	3.2	1.6	0.51	200	12203032GV
ET 100 4.8/2.4	3/16"	4.8	2.4	0.51	200	12203048GV
ET 100 6.4/3.2	1/4"	6.4	3.2	0.64	150	12203064GV
ET 100 9.5/4.7	3/8"	9.5	4.7	0.64	150	12203095GV
ET 100 12.7/6.4	1/2"	12.7	6.4	0.64	100	12203127GV
ET 100 19.1/9.5	3/4"	19.1	9.5	0.77	50	12203190GV
ET 100 25.4/12.7	1"	25.4	12.7	0.89	50	12203254GV
ET 100 38.1/19.1	1 1/2"	38.1	19.1	1.02	25	12203381GV
ET 100 50.8/25.4	2"	50.8	25.4	1.14	25	12203508GV



ET 100 YELLOW/GREEN - BOX

Description	Internal expanded Ø (inch)	Internal expanded Ø (inch)	Internal expanded Ø (mm)	Wall recovered thickness (mm)	Package (m)	Code
ET 100 2.4/1.2	3/32"	2.4	1.2	0.51	15	12253024GV
ET 100 3.2/1.6	1/8"	3.2	1.6	0.51	15	12253032GV
ET 100 4.8/2.4	3/16"	4.8	2.4	0.51	12	12253048GV
ET 100 6.4/3.2	1/4"	6.4	3.2	0.64	12	12253064GV
ET 100 9.5/4.7	3/8"	9.5	4.7	0.64	10	12253095GV
ET 100 12.7/6.4	1/2"	12.7	6.4	0.64	8	12253127GV
ET 100 19.1/9.5	3/4"	19.1	9.5	0.77	5	12253190GV
ET 100 25.4/12.7	1"	25.4	12.7	0.89	3	12253254GV

ET 100 YELLOW/GREEN - 1-METER TUBING - BOX



Description	Internal expanded Ø (inch)	Internal expanded Ø (inch)	Internal expanded Ø (mm)	Wall recovered thickness (mm)	Package (m)	Code
ET 100 1.2/0.6	3/64"	1.2	0.6	0.41	30	12273012GV
ET 100 1.6/0.8	1/16"	1.6	0.8	0.43	30	12273016GV
ET 100 2.4/1.2	3/32"	2.4	1.2	0.51	30	12273024GV
ET 100 3.2/1.6	1/8"	3.2	1.6	0.51	30	12273032GV
ET 100 4.8/2.4	3/16"	4.8	2.4	0.51	24	12273048GV
ET 100 6.4/3.2	1/4"	6.4	3.2	0.64	24	12273064GV
ET 100 9.5/4.7	3/8"	9.5	4.7	0.64	20	12273095GV
ET 100 12.7/6.4	1/2"	12.7	6.4	0.64	16	12273127GV
ET 100 19.1/9.5	3/4"	19.1	9.5	0.77	10	12273190GV
ET 100 25.4/12.7	1"	25.4	12.7	0.89	6	12273254GV
ET 100 38.1/19.1	1 1/2"	38.1	19.1	1.02	4	12273381GV
ET 100 50.8/25.4	2"	50.8	25.4	1.14	3*	12273508GV

*Packed in a plastic bag

ET301

Self-extinguishing flexible cross-linked heat-shrink thin-wall tube with high shrinking power



FEATURES AND BENEFITS

- Very high 3:1 shrinkage
- Excellent physical and mechanical properties
- Very flexible
- Self-extinguishing UL224

MATERIALS

Shrinking ratio:	3:1
Available diameters:	Ø 1.5mm ÷ Ø 39mm
Available colours:	black
Operating temperature:	-55°C ÷ +135°C
Shrinking temperature:	> 90°C
Fire rating:	Self-extinguishing according to UL224
Longitudinal withdrawal:	-10% ÷ +1%
Dielectric strength:	>20kV/mm

CERTIFICATIONS AND COMPLIANCE

UL224 125°C - UL cert.E 228117
CSA C22.2 No. 198.1-98 OFT



ET 301 BLACK - REEL



Description	Internal expanded Ø (inch)	Internal expanded Ø (mm)	Recovered wall thickness (mm)	Package (m)	Code
ET 301 1.5/0.5	1.5	0.5	0.45	200	12205015
ET 301 3/1	3	1	0.55	200	12205030
ET 301 6/2	6	2	0.70	150	12205060
ET 301 9/3	9	3	0.70	150	12205090
ET 301 12/4	12	4	0.70	100	12205120
ET 301 18/6	18	6	0.80	50	12205180
ET 301 24/8	24	8	1.00	50	12205240
ET 301 39/13	39	13	1.15	30	12205390

ET 301
BLACK - BOX



Description	Internal expanded Ø (inch)	Internal expanded Ø (mm)	Recovered wall thickness (mm)	Package (m)	Code
ET 301 1.5/0.5	1.5	0.5	0.45	15	12255015
ET 301 3/1	3	1	0.55	15	12255030
ET 301 6/2	6	2	0.70	10	12255060
ET 301 9/3	9	3	0.70	8	12255090
ET 301 12/4	12	4	0.70	7	12255120
ET 301 18/6	18	6	0.80	4	12255180
ET 301 24/8	24	8	1.00	3	12255240

ET 301
BLACK - 1-METER TUBING - BOX



Description	Internal expanded Ø (inch)	Internal expanded Ø (mm)	Recovered wall thickness (mm)	Package (m)	Code
ET 301 1.5/0.5	1.5	0.5	0.45	30	12275015
ET 301 3/1	3	1	0.55	30	12275030
ET 301 6/2	6	2	0.70	24	12275060
ET 301 9/3	9	3	0.70	20	12275090
ET 301 12/4	12	4	0.70	16	12275120
ET 301 18/6	18	6	0.80	10	12275180
ET 301 24/8	24	8	1.00	6	12275240
ET 301 39/13	39	13	1.15	4*	12275390

*Packed in a plastic bag

EL 301A WITH ADHESIVE LINER

Flexible cross-linked polyolefin heat-shrink tube with adhesive lining and high shrinking ratio



FEATURES AND BENEFITS

- Very high shrinkage
- Excellent insulating and waterproofing capacity
- Excellent mechanical and chemical resistance
- Self-extinguishing outer wall
- Good adherence on steel, plastic and many other materials

MATERIALS

Shrinking ratio: 3:1

Available diameters: Ø 3mm ÷ Ø 24mm

Available colours: black

Operating temperature: -55°C ÷ +110°C

Shrinking temperature: > 100°C

Flammability rating: Self-extinguishing (outer wall)

Longitudinal withdrawal: -15% ÷ +1%

Dielectric strength: >20kV/mm

CERTIFICATIONS AND COMPLIANCE

EN 60684-2-248

EL 301A BLACK - BOX



Description	Internal expanded Ø (inch)	Internal expanded Ø (mm)	Recovered wall thickness (mm)	Package (m)	Code
EL 301A 3/1	3	1	1	15	12256030
EL 301A 6/2	6	2	1.1	12	12256060
EL 301A 9/3	9	3	1.3	10	12256090
EL 301A 12/4	12	4	1.7	8	12256120
EL 301A 18/6	18	6	2	5	12256180
EL 301A 24/8	24	8	2.5	3	12256240

EL 301A BLACK - 1-METER TUBING - BOX



Description	Internal expanded Ø (inch)	Internal expanded Ø (mm)	Recovered wall thickness (mm)	Package (m)	Code
EL 301A 3/1	3	1	1	30	12276030
EL 301A 6/2	6	2	1.1	24	12276060
EL 301A 9/3	9	3	1.3	20	12276090
EL 301A 12/4	12	4	1.7	16	12276120
EL 301A 18/6	18	6	2	10	12276180
EL 301A 24/8	24	8	2.5	6	12276240

OTHER PRODUCTS

PVC INSULATION TAPE

Self-extinguishing insulation tapes for residential and industrial electric systems



CERTIFICATIONS AND COMPLIANCE

CEI EN 60454-3-1

VDE Approval: no. 40039640



NON-INSULATED END-SLEEVES

Non-insulated end-sleeves for copper conductors ends



CERTIFICATIONS AND COMPLIANCE

Compliant with DIN 46228/1

HALOGEN FREE

INSULATED END-SLEEVES FOR SINGLE CABLES

Polypropylene Insulated end-sleeve for single copper conductors end



CERTIFICATIONS AND COMPLIANCE

Compliant, by colour and size, with DIN 46228/4

CSA certification no.250148



HALOGEN FREE

NON-INSULATED END-SLEEVES

Polypropylene insulated end-sleeves for two copper conductors ends



CERTIFICATIONS AND COMPLIANCE

Compliant, by colour and size, with DIN 46228/4

CSA certification no.250148

HALOGEN FREE