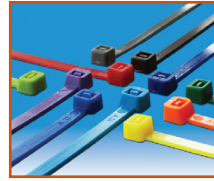


# K-SPEC® CABLE TIES

## Standard Nylon Cable Ties (General Purpose)

- Material with Pure Nylon 6.6, UL 94V-2, Operation temp. -40°F ~+185°F (-40°C~+85°C)
- Suggested Installation temp. 14°F~185°F (-10°C~+85°C)
- Products listed with:



**RoHS PAHs Reach**



Part no.	Color	Width mm [Inch]	Length mm [Inch]	Max Bundle Diameter mm [inch]	Min Loop Tensile Kgs [lb]	Std. Pk. Qty.
E4180C	Black	2.5 [.095]	100 [4.0]	20.5 [0.80]	8 [18]	100
E4180M	Black	2.5 [.095]	100 [4.0]	20.5 [0.80]	8 [18]	1000
E4189C	Natural	2.5 [.095]	100 [4.0]	20.5 [0.80]	8 [18]	100
E4189M	Natural	2.5 [.095]	100 [4.0]	20.5 [0.80]	8 [18]	1000
E6180C	Black	2.5 [.095]	150 [6.0]	36.5 [1.43]	8 [18]	100
E6180M	Black	2.5 [.095]	150 [6.0]	36.5 [1.43]	8 [18]	1000
E6189C	Natural	2.5 [.095]	150 [6.0]	36.5 [1.43]	8 [18]	100
E6189M	Natural	2.5 [.095]	150 [6.0]	36.5 [1.43]	8 [18]	1000
E8180C	Black	2.5 [.095]	200 [8.0]	52.5 [2.06]	8 [18]	100
E8180M	Black	2.5 [.095]	200 [8.0]	52.5 [2.06]	8 [18]	1000
E8189C	Natural	2.5 [.095]	200 [8.0]	52.5 [2.06]	8 [18]	100
E8189M	Natural	2.5 [.095]	200 [8.0]	52.5 [2.06]	8 [18]	1000
E14180C	Black	2.8 [.110]	380 [15.0]	109.8 [4.32]	8 [18]	100
E14180M	Black	2.8 [.110]	380 [15.0]	109.8 [4.32]	8 [18]	1000
E14189C	Natural	2.8 [.110]	380 [15.0]	109.8 [4.32]	8 [18]	100
E14189M	Natural	2.8 [.110]	380 [15.0]	109.8 [4.32]	8 [18]	1000
E5400C	Black	3.6 [.014]	140 [5.5]	33.0 [1.30]	18 [40]	100
E5400M	Black	3.6 [.014]	140 [5.5]	33.0 [1.30]	18 [40]	1000
E5409C	Natural	3.6 [.014]	140 [5.5]	33.0 [1.30]	18 [40]	100
E5409M	Natural	3.6 [.014]	140 [5.5]	33.0 [1.30]	18 [40]	1000
E8400C	Black	3.6 [.014]	200 [8.0]	52.5 [2.06]	18 [40]	100
E8400M	Black	3.6 [.014]	200 [8.0]	52.5 [2.06]	18 [40]	1000
E8409C	Natural	3.6 [.014]	200 [8.0]	52.5 [2.06]	18 [40]	100
E8409M	Natural	3.6 [.014]	200 [8.0]	52.5 [2.06]	18 [40]	1000
E11400C	Black	3.6 [.014]	280 [11.0]	78.0 [3.07]	18 [40]	100
E11400M	Black	3.6 [.014]	280 [11.0]	78.0 [3.07]	18 [40]	1000
E11409C	Natural	3.6 [.014]	280 [11.0]	78.0 [3.07]	18 [40]	100
E11409M	Natural	3.6 [.014]	280 [11.0]	78.0 [3.07]	18 [40]	1000
E14400C	Black	3.6 [.014]	370 [14.5]	106.0 [4.17]	18 [40]	100
E14400M	Black	3.6 [.014]	370 [14.5]	106.0 [4.17]	18 [40]	1000
E14409C	Natural	3.6 [.014]	370 [14.5]	106.0 [4.17]	18 [40]	100
E14409M	Natural	3.6 [.014]	370 [14.5]	106.0 [4.17]	18 [40]	1000

### K-Spec® Part No. Instructions:

**E20175**



Pack Qty	Code
50	L
100	C
500	D
1000	M

Color	Code	Color	Code
Natural	9	Blue*	6
White*	WH	Purple*	7
UVB Resistant Black	0	Gray*	8
Brown*	1	FL. Orange*	16
Red*	2	FL. Yellow*	17
Orange*	3	FL. Green*	18
Yellow*	4	FL. Blue*	20
Green*	5		

\* 100,000 Piece Minimum Order for Colored Ties

# K-SPEC® CABLE TIES

Before you source cable ties or related nylon products, please make a correct choice due to different application purpose

The Cable Ties will be applied to:	Material	Function	Flam Class	Main Material Type	Application Temp.
General Purpose	Nylon 66 (PA66)	General	UL-94V2	Dupont 101F, Ascend 21 SPF(C)	-40°F~+185°F (-40°C~+85°C)

### How to choose the right cable tie

The most important characteristics of a cable tie are:

- the raw-material they are made of (chemicals, weather, and heat resistance, low temperature resistance, the flammability rating)
- the tensile strength they can stand
- the max diameter they can bundle
- the shape of the tie in case of particular applications

### Chemicals resistance

please ask for information about the chemical resistance, if you need to apply the cable ties into a special area

### UV (Weather resistance)

All polymers including the polyamides used for the production of cable ties are sensitive to UV radiation.

The most common additive used for protecting polyamides from UV radiation is carbon powder commonly known as "carbon black".

Natural Cable Ties have low resistance to UV radiation, but natural color usually can reflect the sunlight, so it could be used for general purpose outdoor. But not suggested for outdoor application

Black Cable Ties are additivated with carbon black. They have improved weather and UV radiation resistance and are better suitable for outdoor applications, but this is not enough to protect the material from the damage due to the UV-radiation for a long time. For these needs the weather resistance cable ties could be used.

And if for a long term of outdoor use, and we strongly suggest you to choose Strong UV resistance (weather resistance) material and our strong UV resistance material, it has been tested by UL as an available long term outdoor application.

### Temperature resistance

Polymers are also sensitive to temperatures.

All the material type above mentioned (except for Dupont MT409 & Ascend 41(47)), application of polyamide 6.6 cable ties is possible 26°F (-10°C), the polyamide becomes very brittle at temperatures below -40°F (-40°C). So for continuous use of low temperature, suggested with 26°F (-10°C). But Dupont MT409 & Ascend 41(47) could be applied with -40°F(-40°C) for a long term. The polyamide which can resistant and be applied with a high temperature, please read the related characters, and application temperature from the above table.

### Flamability

The UL 94 test, the Standard for Safety of Flammability of Plastic Materials for Parts in Devices and Appliances testing

The classifications relate to materials commonly used in manufacturing enclosures, structural parts and insulators found in consumer electronic products (V-0, V-1, V-2, HB, from the highest level to the lowest)

### Some Instructions for new UL standard 62275, and for your right choose of a cable ties.

#### • Loop tensile strength

Type 1 or 11 based,

No individual value shall be less than 50 % of the loop tensile strength declared after After heat aging,

After temperature cycling.

Type 2 or 21 based,

No individual value shall be less than 100 % of the loop tensile strength declared after After heat aging,

After temperature cycling.

#### • Minimum installation temperature and Operation temperature test

According to the new standard of UL62275, the minimum installation temperature, and operation temperature test should be made.

Different factory they will declare different minimum installation temperature, and operation temperature as well. so new UL will show such information and to show the quality of the products, and the characters of the products.

#### • Smoke and heat generation

AH-1: Suitable for use in air-handling spaces — 1 (plenums) (for Metallic component, like stainless steel cable ties)

AH-2: Suitable for use in air-handling spaces — 2 (plenums) (for Non-metallic component and Composite component, like nylon cable ties, cable ties fixing, coated stainless steel cable ties)

Tensile Strength, max bundle diameter, and other characteristics are listed in each table.

