K-SPEC® CABLE TIES

Standard Nylon Cable Ties (General Purpose)

	Part no.	Color	Width mm [Inch]	Length mm [Inch]	Max Bundle Diameter mm [inch]	Min Loop Tensile Kgs [lb]	Std. Pk. Qty.
S	**E5500C**	Black	4.6 [.181]	120 [4.7]	23.8 [0.93]	22 [50]	100
	E5500M	Black	4.6 [.181]	120 [4.7]	23.8 [0.93]	22 [50]	1000
	E5509C	Natural	4.6 [.181]	120 [4.7]	23.8 [0.93]	22 [50]	100
	E5509M	Natural	4.6 [.181]	120 [4.7]	23.8 [0.93]	22 [50]	1000
	E7500C	Black	4.8 [.189]	200 [8.0]	49.5 [1.94]	22 [50]	100
	E7500M	Black	4.8 [.189]	200 [8.0]	49.5 [1.94]	22 [50]	1000
	E7509C	Natural	4.8 [.189]	200 [8.0]	49.5 [1.94]	22 [50]	100
	E7509M	Natural	4.8 [.189]	200 [8.0]	49.5 [1.94]	22 [50]	1000
	E11500C	Black	4.8 [.189]	300 [11.8]	81.0 [3.18]	22 [50]	100
	E11500D	Black	4.8 [.189]	300 [11.8]	81.0 [3.18]	22 [50]	500
	E11509C	Natural	4.8 [.189]	300 [11.8]	81.0 [3.18]	22 [50]	100
	E11509D	Natural	4.8 [.189]	300 [11.8]	81.0 [3.18]	22 [50]	500
	E14500C	Black	4.8 [.189]	370 [14.5]	103.5 [4.07]	22 [50]	100
	E14500D	Black	4.8 [.189]	370 [14.5]	103.5 [4.07]	22 [50]	500
	E14509C	Natural	4.8 [.189]	370 [14.5]	103.5 [4.07]	22 [50]	100
	E14509D	Natural	4.8 [.189]	370 [14.5]	103.5 [4.07]	22 [50]	500
	E17500C	Black	4.8 [.189]	430 [17.0]	122.5 [4.82]	22 [50]	100
	E17509C	Natural	4.8 [.189]	430 [17.0]	122.5 [4.82]	22 [50]	100
	E24500C	Black	4.8 [.189]	610 [24.0]	179.9 [7.08]	22 [50]	100
	E24509C	Natural	4.8 [.189]	610 [24.0]	179.9 [7.08]	22 [50]	100
	E36500C	Black	4.8 [.189]	920 [36.0]	278.6 [10.97]	22 [50]	100
	E36509C	Natural	4.8 [.189]	920 [36.0]	278.6 [10.97]	22 [50]	100
HD	**E81200C**	Black	7.6 [.300]	220 [8.6]	57.2 [2.25]	55 [120]	100
	E81209C	Natural	7.6 [.300]	220 [8.6]	57.2 [2.25]	55 [120]	100
	E111200C	Black	7.6 [.300]	300 [11.8]	82.8 [3.25]	55 [120]	100
	E111209C	Natural	7.6 [.300]	300 [11.8]	82.8 [3.25]	55 [120]	100
	E141200C	Black	7.6 [.300]	380 [15.0]	108.0 [4.25]	55 [120]	100
	E141209C	Natural	7.6 [.300]	380 [15.0]	108.0 [4.25]	55 [120]	100
	E181200L	Black	7.6 [.300]	450 [18.0]	130.5 [5.13]	55 [120]	50
	E181209L	Natural	7.6 [.300]	450 [18.0]	130.5 [5.13]	55 [120]	50
	E201200L	Black	7.6 [.300]	540 [21.0]	159.0 [6.25]	55 [120]	50
	E201209L	Natural	7.6 [.300]	540 [21.0]	159.0 [6.25]	55 [120]	50
	E221200C	Black	7.6 [.300]	550 [21.6]	162.5 [6.39]	55 [120]	100
	E221209C	Natural	7.6 [.300]	550 [21.6]	162.5 [6.39]	55 [120]	100
	E241200L	Black	7.6 [.300]	610 [24.0]	181.5 [7.14]	55 [120]	50
	E241209L	Natural	7.6 [.300]	610 [24.0]	181.5 [7.14]	55 [120]	50
	E301200L	Black	7.6 [.300]	750 [29.5]	226.1 [8.90]	55 [120]	50
	E301209L	Natural	7.6 [.300]	750 [29.5]	226.1 [8.90]	55 [120]	50

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 applicated with -40°F(-40°C) for a long term. The polymide which can resistant and be applicated with a high temperature, please read the related characters, and application temperature from the above table.

Flamabilty

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.