

Cable Ties for Special Environments

Material Selection Ordering Guide

Thomas & Betts offers Ty-Rap® cable ties and accessories in a wide variety of materials, each suited for specific environments. The purpose of this document is to assist you in choosing the best material for your particular application. The effects of weathering, flame, chemicals, extreme temperatures, and radiation on the different materials are clearly presented in the following tables to simplify this process. Once you have determined the most suitable material, you can choose from the wide variety of Ty-Rap® cable ties, identification ties, mounting bases, lashing ties, etc., offered by Thomas & Betts.

How to use Table 1:

Table 1 simplifies the material selection process by giving the relative performance ratings of the materials offered by Thomas & Betts. For example, if your application is in an extremely cold environment, four materials will answer your need: Fluoropolymer, nylon 12, Halar® (*), and stainless steel. Then, cost may be your next most important criteria, so out of those four options, nylon 12 would be the most cost effective. However, if tensile strength is important, then stainless steel would be the better choice.

Refer to tables 2 (page C33) and 3 (pages C34-C36) for more detailed information regarding physical properties of the materials and chemical resistance of the materials respectively.

It is extremely difficult to provide data on all the possible combinations or conditions that can occur. This information is based on data provided by the manufacturers of the specific materials listed and is provided only as a general guide. No specific recommendation is intended. As each application may differ, cable tie samples should be tested in the intended application by the user to determine suitability.

* Halar® is the trademark of Solvay Solexis, Inc.

TABLE 1

Available Materials

5 = Most Suitable 1 = Least Suitable

	Natural 66 Nylon	Weather Resistant 66 Nylon	Heat Stabilized Natural 66 Nylon	Flame Retardant 66 Nylon	Weather Resistant Nylon 12	Weather Resistant Polypropylene	Fuoro- polymer	Halar®	Stainless Steel	Weatherable Acetal
Ultraviolet Resistance	1	4	1	1	4	4	5	5	5	4
Radiation Resistance	1	1	1	1	1	1	4	4	5	1
Low Temperature	3	3	3	2	4	3	4	4	5	4
High Temperature	3	3	4	3	2	2	4	4	5	2
Flammability	3	3	3	4	1	1	4	4	5	1
Tensile Strength	3	3	3	3	2	1	3	3	5	2
Relative Cost	Low	Low	Low	Med	Med	Low	High	High	High	High
Chemical Resistance	See Table 3									

Cable Ties for Special Environments

Perfect for outdoor applications!



Colour — Black
For use in temperatures ranging from -40°F to 221°F (-40°C to 105°C)

- Ideal for Industrial OEM and MRO (includes, but not limited to industrial, lawn/garden/farming equipment, recreation vehicles, heavy equipment)
- Can be placed in environments requiring heat stabilization and UV resistance
- Provides a smooth, low-profile look and offers unlimited tensioning range for a perfect fit
- Features an oval head on every original Ty-Rap® Cable Tie
- Quicker to install and less expensive than metallic fasteners, lacing cord or tape
- Made of UV resistant, heat-stabilized nylon



Bulk Cat. No.	Length (in./mm)	Tensile Strength (lb./N)	Bulk Pkg.
Ty-Rap® Heat Stabilized/Ultraviolet Resistant Cable Ties			
TY23MX-A	3.62/91.95	18/80.07	1,000
TY24MX-A	5.50/139.70	40/177.90	
TY25MX-A	7.31/185.67	50/222.40	
TY27MX-A	13.40/340.36	120/533.80	500

Beat the heat!

- Ideal for Industrial OEM and MRO (includes, but not limited to metal processing, paper mills, lighting and commercial construction markets with high temperature environments up to 302°F (150°C))
- Provides a smooth, low-profile look and offers unlimited tensioning range for a perfect fit
- Features an oval head on every original Ty-Rap® Cable Tie
- Quicker to install and less expensive than metallic fasteners, lacing cord or tape
- Made of extra high-temperature resistant nylon



Colour — Light Green
For use in temperatures ranging from -40° to 302°F (-40° to 150°C)

Bulk Cat. No.	Length (in./mm)	Tensile Strength (lb./N)	Bulk Pkg.
Ty-Rap® Extra High-Temperature Cable Ties			
TYHT23M	3.62/91.95	18/80.07	1,000
TYHT25M	5.50/139.70	40/177.90	
TYHT27M	7.31/185.67	50/222.40	
TYHT28M*	13.40/340.36	120/533.80	500

*UR Pending