

DID YOU KNOW?

HYGROSCOPIC CABLE TIES

Be secure with Cable Ties that stay strong in **ALL** climates and weather conditions

►► NOW AVAILABLE!



THE ISSUE WITH LOW HUMIDITY

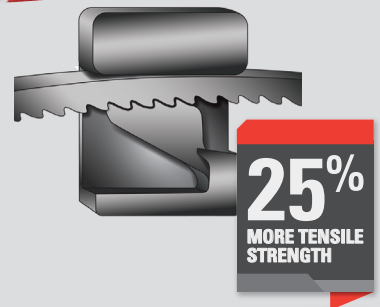
Relatively low humidity including storage in an uncontrolled environment can cause cable ties to dry out and can cause premature breakage and installation issues.

GROTE HAS A SOLUTION FOR YOU!

Introducing our **NEW Elite Cable Ties** designed to deal with the harshest conditions. The newly modified reinforced Nylon 6/6 raw material absorbs and releases moisture as the atmosphere changes, especially in winter months when conditions are cold with little humidity.



NEW



NEW LOCKING DESIGN

Grote's new and improved cable tie includes a new locking design engineered to achieve 25% more tensile strength than advertised. In addition, added moisture during manufacturing helps to protect the ties from environmental factors like low humidity and Ultra Violet Rays (U.V.).

FEATURES & BENEFITS

- Made in USA
- Virgin Nylon 6/6 Raw Material
- UL 62275 Type 2, 21 & 21S
- UV Black Rated
- Mil-Spec Approved
- Performance Series
- Competitive Pricing
- Cold Weather line
- Ship From Stock

FOR MORE INFORMATION VISIT
OUR WEBSITE AT GROTE.COM
GROTE'S GOT IT!

Grote

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www.grote.com

CONNECT & PROTECT

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THE BENEFITS OF TIES MADE FROM NYLON 6/6 RAW MATERIAL

- They will absorb and release moisture as the atmosphere changes
- During manufacturing we add up to 2.5% moisture to the packaging
- It takes 48 hours for the moisture to be absorbed into the Nylon 6/6
- Moisture is what gives cable ties their flexibility
- In dry conditions moisture will release from Nylon 6/6 within 24 hours



Nylon cable ties and duct straps are **hygroscopic** – this means they absorb and release water as the atmosphere changes, especially in winter months when conditions may be not only cold but also dry. Virtually all brittleness problems occur in this type of weather or where cable ties have been stored in an uncontrolled condition. A moisture content of 2.5% allows for flexibility and easy bending of the straps. When moisture in the product is below 1%, they can become brittle.

The pawl (lock) inside the head of the straps must flex (“see-saw”) over the teeth of the strap. When the humidity is below 40%, mostly in winter months, the pawl may not flex and can be forced to pop out upon insertion of the strap into the head. The strap of the tie may also become brittle and crack under these conditions.

HYGROSCOPIC

A property of a substance that absorbs and releases moisture from the air of its surroundings

RELATIVE HUMIDITY

NYLON 6/6
RELEASES
MOISTURE

← 40% →

NYLON 6/6
ABSORBS
MOISTURE

RoHS MIL-SPEC  62275-TYPE 2, 21 & 21S

HOW TO SELECT THE RIGHT CABLE TIE

STEP 1 | SELECT THE RIGHT CABLE TIE MATERIAL FOR THE JOB

- Standard Nylon 6/6 – for everyday indoor/outdoor bundling applications
- Elite cold weather – for dry, cold climate where humidity is low

STEP 2 | SELECT THE RIGHT TENSILE STRENGTH & LENGTH FOR THE JOB

- 18lb up to 175lb
- Choose the cable tie length for the desired bundle diameter needed – 4" to 36" lengths

STEP 3 | PROPER INSTALLATION RECOMMENDATIONS

- UL tests and recommends installation temperatures at or greater than 32° F (0°C) & 40% humidity
- Over-tightening of the strap can cause failure
- When installing cable ties, make sure a proper tensioning tool is used to ensure the correct force is applied

STEP 4 | PROPER STORAGE RECOMMENDATIONS

- Ties should be stored in a sealed bag in a heated area.
- UL recommends storage of Nylon 6/6 straps at 70°F (21°C) and 50% humidity

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