

Static Electricity or Insulator?

We have had requests from customers to supply synthetic slings that can be used as an insulator and synthetic slings that will resist static electricity and essentially are non-sparking. No single sling meets both requirements at the same time. A sling that is a non-conductor will have the propensity to store static electricity. A sling that can dissipate static electricity will also be a conductor.

Static Electricity: An electric charge that is stationary usually acquired by a body by means of electrostatic induction or friction. Rubbing different materials can produce *static electricity*. When a positive or negative charge builds up in fixed positions on objects, certain phenomena can be observed that are collectively referred to as *static electricity*. The charge can be built up by rubbing certain objects together, such as silk and glass or rubber and fur; the friction between the objects causes electrons to be transferred from one to the other – from a glass rod to a silk cloth or from rubbing a Twin-Path® sling across a rubber hose- with the result that the object that has lost the electrons has a positive charge and the object that has gained them has an equal negative charge. An electrically neutral object can be charged by bringing it in contact with a charged object. An object that has gained static electricity will emit a spark when it is placed near another object.

A sling could build-up a static charge. When this static charge is released through contact with another object, a spark may be generated. This spark could ignite a gas causing a fire.

We have done testing of Twin-Path® Extra slings to determine their conductivity and ability to resist static electricity.

It is important to note that even slings that are listed as non-conductive, or good insulators, can become conductive by contamination from moisture, dirt, dust or oil and grease.

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A sling with conductive fibers, reduces the build-up of static electricity and is safer to use in areas where sparks would be dangerous. The only cover with this capability to date is Covermax® from Southern Weaving.

Non-conducting slings are those with Murdock Covermax® Green, Gray and Nomex® covers, and Polyester covers from both Murdock and Southern Weaving.

Non-Sparking slings are those with Southern Weaving Green Covermax® covers.

The Southern Weaving Covermax® tube in tube is made with carpet fibers integrated into the material. These minute fibers are capable of conducting small amounts of electricity and will dissipate static electricity. Several customers have asked us to make sure the Twin-Path® Slings they are using will resist static electricity, and we do this by using the Southern Weaving Covermax® tubing or by spraying other covers with static guard. The spray makes the sling a conductor.

If you are asked to supply a synthetic sling as an insulator, make sure you warn that the sling will conduct electricity if it is contaminated with moisture, dirt, dust, grease, oil, or any number of materials. Just because a sling has passed a test and is rated a good insulator does not mean that it will remain so during its lifetime.