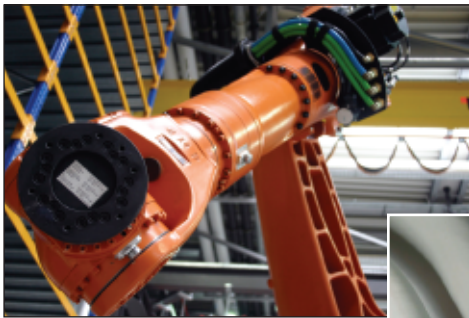


Slimmer Cables Can Take More Flexing

Northwire Inc. produces slim-profile cables with extended flex life and UL recognition using DuPont™ Hytrel® thermoplastic polyester elastomer for insulation.



In Northwire's UL-recognized robotic cable, Hytrel® provides effective insulation and excellent flex life.



Manufacturer
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For More Information...
<http://plastics.dupont.com>



The miracles of science™

The excellent mechanical strength and dielectric strength of Hytrel® allow production of cables with extended flex life by providing effective insulation in thinner layers than many alternative materials. Its other key advantages in cables that flex include a hard, slippery surface and excellent flex fatigue resistance.

Northwire Inc. is leading the way in delivering the benefits of cable made with Hytrel® to robotic and other mobile automation equipment with the first 90 and 105°C UL recognitions for Hytrel® under the UL 758 standard. These are embodied in Northwire's UL style 10912 AWM.

Northwire is also delivering the benefits of Hytrel® in cables that flex in other fields. For example, when a large multi-conductor signal cable for a lift bridge failed after less than two years in service, the company had a ready solution. The old cable, which used ethylene-propylene rubber for insulation, measured 1.86 in. (47 mm) in diameter. The replacement cable using Hytrel® for insulation is more than 40% smaller; its diameter is 1.1 in. (28 mm). This is a key advantage as cables are unwound and rewound on reels as the lift span is raised and lowered.

Benefits gained

Extended flex life. At any given bend radius, the smaller cable-diameter permitted by Hytrel® provides longer flex life than thicker cables.

UL recognition. Northwire's pioneering work in obtaining UL recognition of its cables made with Hytrel® allows manufacturers of robotic equipment to meet their customers' electrical safety requirements.

Extrusion productivity. Hytrel® has excellent stability during extrusion of thin insulation layers, just 0.008 or 0.010 in. (0.20 or 0.25 mm) thick in the case of Northwire's robotic cables.



Material Selected, and Why

Hytrel® delivers a combination of high mechanical strength, dielectric strength, flex fatigue resistance, toughness, oil resistance and other properties required for cables that must flex repeatedly during service. In addition, it exhibits excellent stability and productivity during extrusion.

The data listed here fall within the normal range of properties, but they should not be used to establish specification limits nor used alone as the basis of design. The DuPont Company assumes no obligations or liability for any advice furnished or for any results obtained with respect to this information. All such advice is given and accepted at the buyer's risk. The disclosure of information herein is not a license to operate under, or a recommendation to infringe, any patent of DuPont or others. DuPont warrants that the use or sale of any material that is described herein and is offered for sale by DuPont does not infringe any patent covering the material itself, but does not warrant against infringement by reason of the use thereof in combination with other materials or in the operation of any process.

Let's talk

We have the right materials, technology and technical resources to help you design and manufacture superior parts and systems. Please contact the nearest DuPont representative for your country.

CAUTION:

Do not use DuPont materials in medical applications involving implantation in the human body or contact with internal body fluids or tissues unless the material has been provided from DuPont under a written contract that is consistent with DuPont policy regarding medical applications and expressly acknowledges the contemplated use.

For further information, please contact your DuPont representative. You may also request a copy of DuPont Policy Regarding Medical Applications... H-50103-2 and DuPont Caution Regarding Medical Applications... H-50102-2.

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