

Bridge Cable Fails, DuPont™ Hytrel® to the Rescue



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Photo: DuPont

Slimmer profile of cable insulated with DuPont™ Hytrel® (at left) indicates longer flex life than rubber-insulated cable (at right) that failed after less than two years of service on lift bridge.



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Bad Homburg, May 2008 -- When large rubber-insulated cables for a lift bridge connecting Minnesota and Wisconsin failed after less than two years in service, Northwire Inc. had a ready solution: replacement cable insulated with DuPont™ Hytrel® thermoplastic elastomer.

Because Hytrel® provides effective electrical insulation and toughness in thin layers, the replacement cables using Hytrel® are more than 40 percent smaller in diameter than the one that failed. "Smaller cable diameter means longer flex life at a given bend radius," said Ted Beach, director of sales for Northwire. Hytrel® is ideal for cables that flex because its combination of high dielectric strength and toughness allows its use in thinner layers than many alternative materials.

The old cable, which used ethylene-propylene rubber for insulation of its 50 conductors (16 AWG), measured 1.86 inches (47 millimeters) in diameter. The diameter of the replacement cable using Hytrel® is about 40 percent smaller, just 1.1 inches (28 millimeters). Its conductors are each insulated with 0.010 inch (0.25 millimeter) of Hytrel®. Another advantage for Hytrel® is productivity and stability during extrusion of such thin insulation layers.

Northwire is also bringing the benefits of Hytrel® for insulation to manufacturers and end-users of robots, other industrial automation equipment and retractable coiled cable for various applications. The company recently obtained the first 90°C and 105°C UL recognitions for Hytrel® under the UL 758 standard. These are embodied in UL style 10912 AWM.

Based in Osceola, Wis., Northwire specializes in custom-designed cables for industrial, medical and a variety of specialized markets. For more information, call 1-800-468-1516 or visit <http://www.northwire.com>

For more information about DuPont™ Hytrel®, please visit plastics.dupont.com on the web.

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DuPont is a science-based products and services company. Founded in 1802, DuPont puts science to work by creating sustainable solutions essential to a better, safer, healthier life for people everywhere. Operating in more than 70 countries, DuPont offers a wide range of innovative products and services for markets including agriculture and food; building and construction; communications; and transportation.

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