



REDI-LINK™ DFDA-5440 NT

Crosslinkable Polyethylene for Moisture Curable Power Cable Insulation

Overview

REDI-LINK™ PE is a two component moisture curable crosslinkable system for use in low voltage power cable applications. DFDA-5440 Natural, with a density of 0.922, may be crosslinked after extruding with the DFDA-5430 Natural catalyst masterbatch, with a density of 0.921, in a 50:50 ratio and then allowing moisture to diffuse into the insulation. If a black product is required, the addition of DFDB-5410 Black 55 carbon black masterbatch to DFDA-5430 Natural and DFDA-5440 Natural is recommended.

Specifications:

When DFDA-5440 Natural is crosslinked with DFDA-5430 Natural and optionally, DFDB-5410 Black 55, it meets typical low voltage specifications such as those found in:

- IEC-60502
- GB 12706-91
- IS 7098 - 1988

Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Strength	2390 psi	16.5 MPa	IEC 60811-1-2
Tensile Elongation (Break)	350 %	350 %	IEC 60811-1-2
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Hot Set ¹	< 100 %	< 100 %	IEC 60811-2-1
Aging	Nominal Value (English)	Nominal Value (SI)	Test Method
Retention of Tensile Elongation - 7 days 275°F (135°C)	> 85 %	> 85 %	IEC 60811-1-2
Retention of Tensile Strength - 7 days 275°F (135°C)	> 85 %	> 85 %	IEC 60811-1-2
Electrical	Nominal Value (English)	Nominal Value (SI)	Test Method
Volume Resistivity	2.0E+16 ohms·cm	2.0E+16 ohms·cm	IEC 60502
Insulation Resistance	71400 Mohms·km	71400 Mohms·km	IEC 60502

Additional Information

Storage:

- The environment or conditions of storage greatly influences the recommended storage time. Storage under extreme conditions may affect the quality, processing, or performance of the product. Storage should be in accordance with good manufacturing practices. The recommended storage conditions are dry conditions with temperatures between 50°F and 86°F (10°C and 30°C). When stored under these conditions, the product may be used by the customer for up to one year from the date of sale or two years from the date of manufacture, whichever comes first. It is recommended that the practice of using the product on a first-in / first-out basis be established.

Extrusion	Nominal Value (English)	Nominal Value (SI)
Melt Temperature	356 to 392 °F	180 to 200 °C

Extrusion Notes

REDI-LINK PE is designed primarily for colourable applications and can be processed on any modern thermoplastic extruder. Prior to extrusion, DFDA-5430 Natural and DFDA-5440 Natural are blended together in a 50:50 ratio. Melt temperatures between 180°C and 200°C have been used successfully. For applications requiring weather resistance, the addition of 6.3% DFDB-5410 Black 55, the carbon black masterbatch, to the natural REDI-LINK PE system is recommended. It is especially recommended that the carbon black masterbatch be dried at 60-70°C for four to six hours using dehumidified air prior to mixing and extrusion. This will ensure that REDI-LINK PE will extrude with excellent surface quality and without extrusion scorch.

After extrusion of the appropriate mixture of this product, crosslinking can be achieved by allowing moisture to diffuse into the product. Most fabricators find that a hot water bath or sauna works best.

Notes

These are typical properties only and are not to be construed as specifications. Users should confirm results by their own tests.

¹ Cured in 90°C water, 0.8 mm wall, 8 hr

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Additional Information

North America		Europe/Middle East	+800-3694-6367
U.S. & Canada:	1-800-441-4369		+31-11567-2626
	1-989-832-1426	Italy:	+800-783-825
Mexico:	+1-800-441-4369		
Latin America		South Africa	+800-99-5078
Argentina:	+54-11-4319-0100		
Brazil:	+55-11-5188-9000		
Colombia:	+57-1-219-6000	Asia Pacific	+800-7776-7776
Mexico:	+52-55-5201-4700		+603-7965-5392

www.dowplastics.com

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