REDI-LINK™ DFDA-5440 NT

Crosslinkable Polyethylene for Moisture Curable Power Cable Insulation

The Dow Chemical Company

Message:

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

General Information			
Uses	Low voltage insulation Wire and cable applications		
Agency Ratings	IEC 60502		
Forms	Particle		
Processing Method	Profile extrusion molding		
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Strength	16.5	MPa	IEC 60811-1-2
Tensile Elongation (Break)	350	%	IEC 60811-1-2
Aging	**Nominal Value**	**Unit**	**Test Method**
Tensile strength retention-7 days (135°C)	> 85	%	IEC 60811-1-2
Elongation retention rate-7 days (135°C)	> 85	%	IEC 60811-1-2
Thermosetting-thermosetting [1]		%	IEC 60811-2-1
Insulation Resistance	71400	Mohms·km	IEC 60502
Electrical	**Nominal Value**	**Unit**	**Test Method**
Volume Resistivity	2.0E+16	ohms·cm	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	Unit
Melt Temperature	180 - 200	°C
Extrusion instructions		

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.

NOTE	
1.	Cure in 90°C water, 0.8mm wall, 8 hours

Recommended distributors for this material

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