# REDI-LINK™ DFDA-5430 NT

Catalyst Masterbatch for Moisture Curable Power Cable Insulation

The Dow Chemical Company

## Message:

REDI-LINK PE is a two-component moisture-curable and crosslinkable system for low-voltage power cables. The density of the DFDA-5440 Natural is 0.922, and after mixing with the DFDA-5430 Natural catalyst masterbatch with a density of 0.921 according to a ratio of 50:50 and extruding together, crosslinking reaction may occur when moisture diffuses into the insulating material. If black cables are required, it is recommended to add DFDB-5410 Black 55 carbon black masterbatch to DFDA-5430 Natural and DFDA-5440 Natural.
Since the DFDA-5430 Natural is transported separately from the DFDA-5440 Natural, its components are very stable during the shelf life. The crosslinking reaction can only occur when the melt of these components is mixed and exposed to water.
specifications:
when the DFDA-5440 Natural uses DFDA-5430 Natural for cross-linking or DFDB-5410 Black 55 for cross-linking, its products can generally meet the following specifications of low-voltage cables:
IEC-60502
GB 12706-91
IS 7098 - 1988

| General Information | | | |
|---|---|---|---|
| Uses | Low voltage insulation<br>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 |
| Thermoset [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. | Cured in 90°C water, 0.8 mm wall, 8 hr |



## Recommended distributors for this material

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