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PERFORMIX 1251-M – For Monosil Process

Package for the production of moisture curable LV and MV cables by Monosil crosslinking process

Introduction

PERFORMIX 1251-M is a multi-component silane formulation suitable for the manufacturing of low and medium voltage crosslinked polyethylene cable insulation with aluminum or copper core, using the Monosil process.

With the correct dosage of PERFORMIX 1251-M, cable insulation can comply with the IEC 60502 standards.

Key advantages are;

- Suitable for both aluminum and copper cored cables
- Suitable for low voltage cables and medium voltage cables
- Crosslinked insulations meet IEC 60502 aging requirement of 135°C for 7 days
- Excellent processibility
- Suitable to be used with a wide range of nonstabilized polyethylene
- Cost effective, Low dosage level
- Colorable

Typical Properties and Recommended Dosage

Form : Low viscosity liquid
Color : Light yellow / Straw
Odor : Mild
Dosage : 1.2 – 1.6% by weight of base resin

Processing - Cable extrusion

PERFORMIX 1251-M should be processed with a suitable based resin in Monosil system at the following temperature (in °C) ;

Feed : 160 – 180
Compression : 170 – 190
Metering : 180 – 200

Neck : 200 – 220
Die : 210 – 240

Various grades of polyethylene from regional or international producers can be used. It is recommended that polyethylene should have low levels of additives. Polyethylene should contain no more than 200 ppm of moisture.

It is recommended that any color masterbatches, especially carbon black masterbatches, be thoroughly dried at 60-70°C for 4 hours before use.

The finished cable needs to undergo a post extrusion curing process to complete the crosslinking. Curing time depends on quantity of moisture, temperature and thickness of insulation. Typical curing time and conditions for normal insulation (2.0 – 3.0 mm insulation thickness) are;

Hot water (90°C) : 3 – 6 hours
Ambient (80%RH, 30°C) : 7 – 20 days

Packaging, Handling and Shelf Life

The product is packed in 200L steel drum with 200 Kg nett weight. Product should be stored in cool and dry conditions. Ensure that the content do not comes into contact with water or excessive moisture.

To ensure maximum storage period for opened drums, caps must be closed tightly after every time drums are opened. Prolonged storage above 50°C may cause deterioration of the product. It is recommended that product shall be used at temperature not lower than 10°C.

Under normal storage conditions, the shelf-life for unopened drum is 2 years.

About the company

Alchemix Pte Ltd is a Singapore registered company specializing in technology transfer, development and production of specialty products for the cable industry.

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