



## ZARLNK<sup>TM</sup> SC0592

# Medium Voltage Semiconductor Compound – Peroxide

#### • Description

ZARLNK<sup>TM</sup> SC0592 is a crosslinkable black polyethylene compound, specially designed for semiconductive conductor screen and bonded insulation screen of power cables.

#### • Applications

ZARLNK<sup>TM</sup> SC0592 is intended for semiconductive screen of XLPE medium voltage (MV) AC cables with rated voltages up to 33 kV (Um = 36 kV). It can be used as conductor and insulation screen for bonded cable constructions and as conductor screen for strippable cable constructions.

The values are voltages between phases as defined in IEC 60183.

#### Specifications

ZARLNK<sup>TM</sup> SC0592 LE0592 is expected to meet the applicable requirements included in the below mentioned standards provided it is processed using sound material handling, extrusion and crosslinking practices as well as appropriate testing procedures. This applies up to the maximum recommended voltage level indicated in "Applications" section above since some standards cover wider voltage ranges.

IEC 60502-2

AEIC CS9 (below 8 kV/mm) AEIC CS8

ANSI/ICEA S-108-720 ANSI/ICEA S-93-639 ANSI/ICEA S-94-649 ANSI/ICEA S-97-682

DIN VDE 0276-620 DIN VDE 0276-632

Cenelec HD 620 S2 (Part 1) Cenelec HD 632 S1

NF C33-226 UL 1072

### • Special Features

ZARLNK<sup>TM</sup> SC0592 is a ready-to-use semiconductive compound. It offers excellent thermal stability which provides robust cable extrusion and crosslinking at high surface temperature, allowing for high line speed.

The excellent distribution of carbon black and additives in ZARLNK<sup>TM</sup> SC0592 results in a smooth semiconductive screen.

#### Physical Properties

Data should not be used for specification work





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Property	Typical Value	Test Method
Density (Base Resin)	1.13 gr/cm3	ISO 1183
Elongation at Break (250 mm/min)	>150 %	IEC 60811-401
Tensile Strength (250 mm/min)	14 N/mm2	IEC 60811-401
Change of Tensile strength after aging 168h, 135°C	< 25%	IEC 60811-401
Hot set test (200'C, 20N/cm2) Elongation under load	<100 %	IEC 60811-507
Permanent Elongation	<10 %	"
MDR, max torque	12 dNm	ISO 6502

#### • Electrical Properties

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Property	Typical Value	Test Method
DC Volume Resistivity (23°C)	<100 Ohm.cm	ISO 3915
DC Volume Resistivity (90°C)	<1000 Ohm.cm	ISO 3915

#### Processing Techniques

ZARLNKTM SC0592 provides excellent surface finish and outstanding output rates, when processing conditions are optimized for the actual processing equipment and cable dimensions. Optimal conditions may vary according to the equipment used. Hence all material handling should preferably be conducted in closed systems and in clean room conditions. Please contact your Borealis representative for more details.

#### • Pre-drying

It is recommended that ZARLNK<sup>TM</sup> SC0592 is dried prior to extrusion. Typical drying conditions are shown below: Pre-drying (4 h) 60 °C With dehumidified air

#### • Extrusion

A screen-pack on the extruder is recommended for improved melt homogenization. Typical processing temperature ranges for ZARLNK<sup>TM</sup> SC0592 are shown below:

Melt temperature

120 - 135 °C

### Packaging

Package: Small Octabin (700 kg)







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### **Medium Voltage Semiconductor Compound – Peroxide**

#### • Storage

ZARLNKTM SC0592 has a shelf life of 18 months from production date if stored in unopened original packages, under dry and clean conditions at temperatures between 10 - 30 °C (50 - 85 °F).

Material shelf life is affected by the storage conditions and extreme conditions influence the general material quality and performance. An opened package should be used within two weeks or be sealed airtight for further storage. Before use, material shall be conditioned indoors (production room) to reach ambient temperature. It is also recommended to ensure proper stock rotation by First In – First Out principle.