



### Medium Voltage Semiconductor Compound

- **Description**

ZARLNK™ SC0592 is a crosslinkable black Polyolefin compound, specially designed for semiconductive conductor screen and bonded insulation screen of power cables.

- **Applications**

ZARLNK™ SC0592 is intended for semiconductive screen of XLPE medium voltage (MV) AC cables with rated voltages up to 33 kV ( $U_m = 36$  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™ 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™ 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™ SC0592 results in a smooth semiconductive screen.





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In tables where two figures are given in a cell , first figure is temperature in setup stage with low speed and second is in production stage and full speed.

Inner Semiconductor Extruder							
Screw	Zone 1	Zone 2	Zone 3	Zone 4	Clamp	Connection 1	Connection 2
90	106 - 111	108 - 113	112 - 115	115 - 117	120 - 122	122 - 125	122 - 125

Outer Semiconductor Extruder							
Screw	Zone 1	Zone 2	Zone 3	Zone 4	Clamp	Connection 1	Connection 2
95	115 - 120	115 - 120	117 - 122	117 - 122	122 - 125	122 -125	122 -125

- Please note that to get smoother surface on outer semiconductor layer , related extruder temperature are set +10°C more than inner semiconductor extruder.

For **Screen Packs** , cable maker shall use best optimum number and size of screen packs as per best practice on line , however following recommendation as minimum should be followed:

- \* Inner Semiconductor layer : 20/80/80
- \* Outer Semiconductor layer: 20/80/80

In case the pressure exceeds 350 bars , you can reduce the number of screen packs to reach 290 bar.

- **Packaging**

Package: Small Octabin or Tetrabin (600 kg to 1200kg)

- **Storage**

ZARLNK™ 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.