



PLEXCHEM TECHNOLOGIES

PLEXSHIELD SCS-53 B FULLY BONDED CROSSLINKABLE SEMICONDUCTIVE COMPOUND

Plexshield SCS-53 B is a fully bonded crosslinkable compound that is used as an insulation screen for cables up to including 33 KV

Grade			SCS-53 B	
Description			Bonded crosslinkable semi conductive compound	
Application			For application up to 35KV conductor and insulation shield	
Characteristics			Excellent surface smoothness, exceptional heat deformation and scorch resistance properties	
Meet requirements			IEC 60502, 60840	
Properties	Test Method	Unit	Specification	Typical Value
23°C Volume Resistivity	ASTMD 991	Ω. cm	< 100	70
Density	ASTM D 792	g/cm ³	1.08-1.18	1.12
Tensile Strength (250 mm/min)	ASTMD 638	MPa	> 12	13.5
Elongation (250 mm/min)	ASTMD 638	%	> 180	200
Heat Aging Variation			(135±2 °C, 168 h)	(135±2 °C, 168 h)
Tensile Strength Elongation at Break	ASTMD 638	%	±40	-14
	ASTMD 638	%	±40	-20
Hot Set Test (200 °C, 0.2MPa, 15 min)	IEC 60811-2-1			
Elongation under Load		%	< 175	90
Permanent Set After Cooling		%	< 15	0
E.S.C.R 100% "IGEPAL" F20	ASTMD 1693	Hrs	>200	>200

Press sheet conditions: 175 °C, 15 min, 15 MPa *Data should not be used for specification work

Processibility of Compounds

Extruder

Recommended using a standard PE extruder with a cooling screw

Screw diameter : 120-150mm

Length of screw : 20-25 D

Screw design : Troester or equivalent having the last 2 D as a Maddox mixing zone or with Shear –mix elements to achieve very good thermal mixing and homogenization of the melt. This is important to prevent overheating of the melt.

Screen packs : with 4-5 screens (1/0.5/0.3/(0.2))*/0.5

- * Optional

Extruder Temperature/Melt Pressure Profile

Barrel	Z 1	Z 2	Z 3	Z 4
Temperature °C	100	105	110	115(+/- 4°C)

Screw Temperature 100 (+/- 10°C)

Hopper Temperature 50 (+/- 5°C)

NOTE: *It is important to keep the melt temperature under 135°C to avoid “scorching”*

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