Product Data sheet

09 Aug 2022 Rev 1

SEJI CHEMICAL CO,. LTD.

SJ-110HV

Crosslinkable Semiconductive Shielding Compound

Overview

SJ-110HV is a outstanding crosslinkable semiconductive polyethylene copolymer compound for conductor and bonded insulation shielding of medium high voltage XLPE insulated power cable. (up to 154 kV).
SJ-110HV provides a super-smooth surface yielding virtually perfect interface between the extruded shield and insulation.
Significantly improved cable performance can be expected.
SJ-110HV has stable volume resistivity at elevated temperatures and high resistance to scorch.

Specifications

ICEA S-93-639, ICEA S-94-649, IECA-97-682
IEC 60502-2, 60840
AEIC CS8, CS9
DIN VDE 0276-620, DIN VDE 0276-632
UL 1072

Properties

This TDS is typical data only and are not to be construed as specifications. Users should results their own test. Tests are conducted on compression molded slabs cured 15 minutes at 180℃.

Physical	**Value (English)**	**Value (SI)**	**Test Method**
Density	1.15 g/㎤	1.15 g/㎤	ASTM D 1505
Moisture Content	300 ppm	300 ppm	ASTM D 6869
Melt Flow Rate[125°C(257℉)/10.0 kg]	1.30 g/10min	1.30 g/10min	ASTM D 1238
Brittleness temperature	<-50 °C	<-50 °C	ASTM D 746

Mechanical	**Value (English)**	**Value (SI)**	**Test Method**
Ultimate Tensile Strength	2750 psi	19.0 Mpa	ASTM D 638
Elongation at Break	200 %	200 %	ASTM D 638
Retention of Tensile Strength After Ageing - 135°C[275℉], 168hrs	90 %	90 %	IEC 60811-401
Retention of Elongation After Ageing - 135°C[275℉], 168hrs	90 %	90 %	IEC 60811-401
Hot Set Test[200°C, 0.2MPa) Elongation under load	100 %	100 %	IEC 60811-507
Hot Set Test[200°C, 0.2MPa) Permanent deformation	10 %	10 %	IEC 60811-507

Electrical	**Value (English)**	**Value (SI)**	**Test Method**
Volume Resistivity			ASTM D 991
at 23℃[73.4℉]	100 Ωcm	100 Ωcm	
at 90℃[194℉]	500 Ωcm	500 Ωcm	
at 135℃[275℉]	1,000 Ωcm	1,000 Ωcm	

Processing

SJ-110HV provides excellent surface finish and outstanding output rates over a broad range of

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extrusion conditions.
SJ-110HV requires melt stock temperatures in the range of 120℃ to 135℃ for best results.
Lower melt temperatures may result in unmelted extrudate and higher melt temperatures may result in extrudate scorch and It can even trigger die-drools.
The curing configuration : the maximum cable surface temperature in the curing zone should be maintained below 200ºC. If the surface temperature of the cable in the curing zone is over 200ºC, it may cause cracks in the cable, so careful temperature control is required. Dehumidified hopper drying at 60~70℃ for up to 4 hours prior to extrusion could help remove moisture.
Specific processing conditions depend on equipment and cable dimensions.
Optimum conditions by conventional practices should be established.

Packing & Storage

Packed in 600kg polybag lined carton box.
Recommended maximum storage period is 12months unopened and in original packaging after the manufacture.

Stored at room temperatures 86 ℉ 30 ℃
The shelf life of this product is 1 year from the date of manufacture.

Safety

Please contact Seji Chemical for Material Safety Data Sheet.

Disclaimer

Information contained in this data sheet is up-to-date and correct as at the date of issue.
Seji chemical Co., Ltd. cannot control or anticipate the conditions under which this product may be used, each user should review the information in specific context of the planned use.
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