



TECHNICAL INFORMATION

KLJ PX SEM 835 R

October 2022 , Ed3

THERMOSET STRIPPABLE SEMI-CONDUCTING COMPOUND

Description:

KLJ PX SEM 835 R is a Semi Conducting cross-linkable conductor shielding strippable compound for medium voltage power cables. Further the material has very high resistance to scorch. It is easy to process and has low volume resistivity.

Specification:

KLJ PX SEM 835 R meets the requirement of:

- IEC 60502
- IEC 60840

The standards referred to above is a short selection of standards and does not cover all applicable standards. Contact your KLJ representative for additional information.

Application:

Semiconducting KLJ PX SEM 835 R has been designed to meet the conductivity requirements of both conductor and insulation shield for medium voltage cables up to 36 KV.

Cables manufactured with KLJ PX SEM 835 R conductor and insulation shields are rated for 90°C continuous service and 130°C overload temperature.



SEMI CONDUCTING COMPOUND



9001:2015



14001:2015

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Technical Characteristics:

Properties	Unit	Test Method	Specification	Typical Value
Density	g/cm ³	ISO 1872-2	1.15- 1.25	1.18
Hardness (1 sec)	Shore	ASTM D 2240	45±2	46
Tensile Strength at Break	MPa	IEC 60811-1-2	≥ 15	19
Elongation at Break	%	IEC 60811-1-2	≥ 250	300
After Ageing (168 h, 135 °C)				
Retention of Tensile strength	%	IEC 60811-1-1	>90	>90
Retention of Elongation	%	IEC 60811-1-1	>90	>90
Hot Set @ 200°C, 20N/cm ²	%	IEC 60811-2-1	≤100	50
Permanent Set after cooling	%	IEC 60811-2-1	≤10	4
Degree of crosslinking	%	ASTM D2765A	80±5	81
Low Temperature Brittleness	°C	ASTM D746	<-45	<-45
Moisture Content (KF method)	ppm	ISO 15512	≤ 300	100
Heat Deformation(120°C x 2kg),	%	IS 10810 P 15	<50	10
ESCR 100% , IGEPAL F20	hrs	ASTM D 1683	>500	>500
DC Volume Resistivity		ISO 3915		
-23°C	ohm-cm		≤100	50
-90°C	ohm-cm		≤900	500
-110°C	ohm-cm		≤1000	700
Stripping Force	N/cm	IEC 60811-1-2	<40	10

*Tensile properties on 1 mm molded sheet.

Processing Guidelines

Semiconducting KLJ PX SEM 835 R has been formulated to be easily extrudable using conventional polyethylene extrusion lines. For optimum extrusion result with KLJ PX SEM 835, use melt extrusion temperature in the range of 90 - 105°C, Triple Cross Head 110°C & Connecting Flanges 110°C. Specific processing condition can be determined only by trials on individual equipment.

Semiconducting KLJ PX SEM 835 R absorbs moisture, which can result in porosity in the extrudate. It is therefore recommended that the compound be thoroughly dried prior to use, usually 2-4 hours in hopper drier at 40 °C.



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Shelf Life/Storage:

- KLJ PX SEM 835 R can be stored for 365 from date of manufacturing, however it is suggested to use within 90 days from the date of receipt. Shelf life is subject to storage in original intact packing, in cool and dry place, away from sunlight and weathering, storage temperature not generally exceeding 35°C.
- Use the compound immediately.

Packaging:

KLJ PX SEM 835 R:

Form: Granules.

Package: 25 kg aluminium multilayer bag and 650 kg Octabin with aluminium liner with Top & Bottom discharge as required by the customer.

Safety:

This compound is not classified as dangerous preparation.

The products are supplied in the form of free-flowing granules of approx. 2-3 mm size and can be readily handled with commercially available equipment. Handling and transport of the products may generate some dust and fines, which constitute a potential hazard for dust explosion. All metal parts in the system should, therefore, be properly grounded. Properly designed equipment and good housekeeping will reduce the risk. Inhalation of any type of dust should be avoided as it may cause irritation of the respiratory system.

The product is intended for industrial use only. MSDS is available on request.

For technical service & further information and assistance:

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Disclaimer: The data given above are for the guidelines purpose only. Above compound is suitable to run on different machines; however some adjustments may be required on individual machine. All properties are tested as per ASTM/IS/IEC standards. Any data may change without prior information. The customers are advised to check the quality, prior to commercial use. There is no guarantee and/or warrantee what so ever, after processing.