



Ddev Plastiks Industries Limited

An ISO 9001:2015 company
TECHNICAL DATA

Black Track resistance HDPE Sheathing / Jacketing Compound :

KI – BS - 3681

DESCRIPTION :

KI-BS-3681 is black High density polyethylene (HDPE) sheathing / jacketing compound for fibre optic cables designed for installation in high voltage power transmission lines.

KI-BS-3681 has a specially designed carbon black and UV additive package to give excellent track resistance properties as well as outdoor weathering properties.

The compound may also be used for other applications where thermoplastic track resistance materials can be applied. It can resist severe installation conditions and service conditions at even elevated ambient conditions.

Technical Properties:

Track resistance of KI-BS-3681 done as per IEC 60587 and it passes > 6 hours.
It meets specification of EN 50397-1.

Properties	Unit	Typical Value	Test Method
Density of Compound	gm / cm ³	1.10	ASTM D-792
Melt flow index @ 190°C / 2.16 kg_load	gm / 10 min	0.40 – 0.60	ASTM D-1238
Oxidation Induction Time	Minutes	> 100	ASTM-D-3895
Tensile Strength at break	MPa	> 20.0	ASTM-D-638
Elongation at Break	%	> 650	ASTM-D-638
Oven ageing at 110 °C, 14 Days Variation in Tensile Strength	%	± 20	IEC 60811-2-1
Variation in Elongation at Break	%	± 20	IEC 60811-2-1
Brittleness temperature	°C	<-80°C	ASTM D746
ESCR @ 50°C (No failure)	Hrs.	> 2000	ASTM-D-1693
Hardness	Shore D	59 - 60	ASTM-D-2240
Water absorption	mg/cm ²	< 1	IS 10810-33
Di-Electric Constant @25°C	-	2.5	ASTM-D-150
Dissipation Factor @25°C	-	0.0002	ASTM-D-150
Di-electric Strength	KV/mm	> 20	ASTM-D-149
Volume Resistivity@25°C	Ohm-cm	> 1x10 ¹⁵	ASTM-D-257
Track resistance properties (3.50 KV,0.3ml contaminates per minute)	Hrs	> 6	IEC 60587

All properties have been determined from compression moulded plaque after 24 hours conditioning.

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PRE DRYING : Dehumidified hopper drying at 70°C for 1 to 2 hours prior to extrusion may be used to remove moisture. Specific processing conditions depends on type / size of the extruder and cable dimension and output.

PROCESSING CONDITIONS :

Position	Temperature (°C)
Barrel	180 - 200
Head	200 - 220
Die	230

PACKAGE : 25 kgs packed woven sack bags containing inner PE liners, Other packing to customers specific requirements are also available.

STORAGE : Storage should be in cool & proper place. Bags should be kept top of Wooden or plastic pallets.

The information given in the document is believed to be reliable and is given in the good faith but without warranty. The user should test the product to ascertain the suitability for the intended use. Product specification or the whole document is subject to change without any prior notice.

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