

js-link BRAND KDC-FR450

Silane Crosslinkable Halogen Free Flame Retardant
Polyolefin Compound

KDC-FR450 is Silane Crosslinkable Halogen Free Low Smoke Flame Retardant
Insulation & Sheathing Compound for Wire & Cable .
The Crosslinking is activated after presence of moisture.

All components exist within the compound as one pack system and no premixing or no
preheating is required.

TEST RESULT

Properties	Requirement	Test value	Test Method
Density @ 23°C		1.40	ASTM D792
Oxygen index		36	ASTM D2863
Tensile strength before aging	> 12.5 Mpa	16	IEC 60811-1-1
Tensile strength after aging (135 °C x 7 days)	< 25 %	5	IEC 60811-1-2
Elongation at break before aging	> 200 %	200	IEC 60811-1-1
Elongation at break after aging (135 °C x 7 days)	< 25 %	10	IEC 60811-1-2
Hot test (20N/cm ² at 200 °C)	< 175 %	90	IEC 60811-2-1
Set test	< 15 %	5	IEC 60811-2-1
Halogen acid gas evolution		not detected	IEC 60754-1
Volume Resistivity (23 °C)	Ω x CM	8x10 ¹⁵	ASTM D257
Corrosion test	PH	6.5	IEC 60754-2
Smoke Density	< 150 Dm	80	ASTM E 662
Hot Pressure test (80°C)	%	5	IEC 60811-3-1
Cold Impact test (-15°C)		Pass	IEC 60811-1-4

EXTRUSION EQUIPMENT

Normal PVC or PE extruders are suitable.

- L/D Ratio : 24 : 1
- Screw compression ratio : 1.2 – 3 :1
- Die head design : Flat surface die design is preferred.
For extrusion die, the recommended draw down
Ratio is > 2.0 : 1.0
- Screen mesh : Not necessary or when necessary 40/60
- Cooling water temperature should be above 15 °C

EXTRUSION TEMPERATURES

The following temperature profile is recommended.

Zone 1	Zone 2	Zone 3	Neck / Head	Die
100 - 120	120 -140	150 - 170	160 - 180	170 - 190

CURING TIME

The time of full cure will depend on insulation thickness and temperature of hot water or stream.

Insulation thickness	Temperature hot water	Time	Ambient 80 % RH, 28 °C
0.2 – 0.7mm	100 °C	3 Hours	10 – 15 Days
0.8 – 2 mm	100 °C	4 Hours	15 – 20 Days

In case of 80 °C hot water, curing time will be extended by additional 1 hour.

STORAGE

Store under cool and dry conditions at between 10° -30°C

SHELF LIFE

The period of 6 months from the date of manufacture can normally be estimated.

FORM AND PACKING

- Form : Pellets
- Packing : 500 kg /25 kg Carton Box/Paper Bag with Aluminum Liner

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