

Product Information:

KKX-XLPE/CAT-XL is a silane crosslinkable natural compound system designed for insulation of low voltage energy cables. KKK-XLPE / CAT-XL is designed for Insulation of low voltage energy cables, range up to 6 kV.

KKX-XLPE is a low density polyethylene, copolymerised with vinyl silane. CAT-XL is an ambient crosslinking catalyst masterbatch specially designed to be used. The system is highly active and crosslinks quickly at in sauna or in hot water.

Cable insulation with a proper mixture of KKK-XLPE (95 parts) and CAT-XL (5 parts) exhibits excellent thermo-oxidative stability. The combination is suitable for both copper and aluminum conductors. If the insulation is designed to meet the thermo-oxidative ageing demand required by IEC 60502 at 150°C in contact with copper, the addition of 9 parts KKK-XLPE to CAT-XL is recommended.

Crosslinking by immersion in 90°C hot water 2-6 hours; by exposure to low pressure water steam, 12-15 hours.

KKX-XLPE / CAT-XL in combination meets the applicable requirements as below when processed using sound extrusion and testing procedure:

ASTM D 1248 Type I, Class A, Category 4
HD 603 S1
HD 604 S1, IEC 60502-1

NEMA WC 70/ ICEA S-100-685
NEMA WC 71/ ICEA S-96-659
EN 50290-2-29

Product Data:

Property	Test Method	Unit	Value
Physical Properties			
Melt Flow Rate (190°C- 5 kg)	ASTM D 1238-13	g/10 min	1,7
Density (23°C)	ASTM D-792	gr/cm ³	0,928
Hardness	ISO 868	Shore D	51
Mechanical Properties			
Tensile Strength	ISO 527	N/mm ²	20
Elongation at Break	ISO 527	%	650
Heat Ageing (135°C, 240h)	IEC 60811-401		
Δ Strength		%	<25
Δ Elongation		%	<25
Hot Set Test (200°C,0.2 MPa)			
Elongation Under Load	IEC 60811-2-1	%	<100
Permanent Elongation After Cooling	IEC 60811-2-1	%	<10
Environmental Stress Crack Resistance (50 °C, Igepal 10%, F20)	IEC 60811-406	h	> 96
Electrical Properties			
Dielectric constant (50 Hz)	IEC 60250	-	< 2,3
DC Volume Resistivity	IEC 60093	PΩcm	> 10
Dielectric Strength	IEC 60243	kV/mm	> 22

Extrusion Temperatures: 175°C – 185°C – 195°C – 205°C – 210°C – 220°C – 225°C– 230°C
(40 mesh double sieve and shalom tube should be used.)

Packaging:

KKX-XLPE is packaged in 1200 kg packages and 20 kg aluminum bags.

CAT-XL is packaged as aluminum multi-layer bags with a net content of 1 kg.

Storage&Handling:

KKX-XLPE should be stored in a manner that avoids direct exposure to sunlight and heat (T<30°C). This compound should be used within 6 months after its production date.

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