

Product Information:

KKX-HXLPE/CAT-XL is a silane crosslinkable high density polyethylene natural compound system designed for insulation of low voltage energy cables.

KKX-HXLPE is a high 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-HXLPE (95 parts) and CAT-XL (5 parts) exhibits excellent thermo-oxidative stability. The combination is suitable for both copper and aluminum conductors.

Crosslinking by immersion in 90°C hot water 2-6 hours; by exposure to low pressure water steam, 12-15 hours. It cures after 72 hours at room conditions.

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

IEC 60092/360; IEC 60502 XLPE

VDE 0276 2X11; HD 604 2X11

BS 7655 GP8; HD 626 S1, TX3, TX5 and TX8

Product Data:

| Property | Test Method | Unit | Value |
|--|----------------|--------------------|-----------|
| Physical Properties | | | |
| Melt Flow Rate (190°C- 5 kg) | ASTM D 1238-13 | g/10 min | 0,4 |
| Density (23°C) | ASTM D-792 | gr/cm ³ | 0,945 |
| Hardness | ISO 868 | Shore D | 58 |
| Water absorption 24h at 100°C | EN 60811 | mg/cm ² | <0.50 |
| Water absorption 336h at 85°C | EN 60811 | mg/cm ² | <0.50 |
| Mechanical Properties | | | |
| Tensile Strength | ISO 527 | N/mm ² | 20 |
| Elongation at Break | ISO 527 | % | 500 |
| Heat Ageing (135°C, 168h) | IEC 60811-401 | | |
| Δ Strength | | % | +7 |
| Δ Elongation | | % | +25 |
| Heat Ageing (150°C, 240h) | IEC 60811-401 | | |
| Δ Strength | | % | +5 |
| Δ Elongation | | % | -7 |
| Hot Set Test (200°C,0.2 MPa) | | | |
| Elongation Under Load | IEC 60811-2-1 | % | <50 |
| Permanent Elongation After Cooling | IEC 60811-2-1 | % | <0 |
| Bending test in Air Oven 150°C 240h on untinned copper | IEC 60811 | - | no cracks |
| Electrical Properties | | | |
| Dielectric constant (1kHz) | ASTM D150 | - | 2.4 |
| Volume Resistivity at 90°C | IEC 60502 | Ω x cm | 1.4 E+15 |
| Dielectric Strength | ASTM D149 | kV/mm | 32 |

Extrusion Temperatures: 180°C – 185°C – 195°C – 210°C – 220°C – 225°C – 225°C– 235°C

(40 mesh double sieve and shalom tube should be used.)

Packaging: KKK-HXLPE 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-HXLPE 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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