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## ECOTEK<sup>®</sup> XL-HFFR for Building Wire Insulation

ECOTEK<sup>®</sup> SPL-ZHFR 6002XL/ 7000XL/ 8000XL is Silane grafted Cross-linkable Halogen Free Flame-Retardant Compound for Building Wire Products. These compounds when applied along with Fire-Retardant Barrier material (such as Mica Glass Tape) can also perform as Fire-Resistant Cables. The cross-linking is achieved by Moisture and Heat after blending with suitable catalyst through conventional thermoplastic extrusion line.

Shakun offers a range of Catalyst solutions along with ECOTEK<sup>®</sup> XL-HFFR compounds to select as per customer extrusion and curing preferences.

- SPL-CTMB-09 is **Moisture Cure** Catalyst for curing in Hot Water Bath or under Low Pressure Sauna.
- SPL-CTMB-22M is **Low Reactive** Moisture Cure Catalyst, provides excellent surface finish due to slow reaction during the extrusion.
- SPL-CTMB-22MNA is Low Reactive **Ambient/Self/Fast Cure** Catalyst, along with excellent surface finish the crosslinking happens in ambient condition at faster rate.

## Introduction:

Halogen Free Flame Retardant (FR) compounds are essential for ensuring safety in enclosed spaces, particularly in critical applications such as Wires and Cables. With the advancements in Compounding technology and ongoing Research and Development efforts, Shakun pioneered one of the finest products in Cross-linkable HFFR ECOTEK® SPL-ZHFR 6002XL/7000XL/8000XL which is known for its superior performance attributes.

Manufactured using a fully automated compounding setup at Shakun, our compounds assure consistent high-quality products to our customers. Furthermore, our state-of-the-art testing facility, combined with an experienced Research and Development (R&D) team and stringent quality control measures, ensures world-class product-reliability and performance standards.

XL-HFFR ECOTEK SPL-ZHFR 6002XL/7000XL/8000XL compound is designed to meet flame retardancy requirements, while also offering exceptional processability and mechanical properties. It is specifically formulated for high line-speed building wire applications, adhering to international cable specifications such as BS 7211, BS EN 50525-3-41, VDE 0207/23 HJ1, and VDE 0250/503 HJ3.



## Technical Advantages:

**High Line Speed:** XL-HFFR ECOTEK® SPL-ZHFR 6002XL/7000XL/8000XL compound facilitates high line speeds during processing. Speed achieved up to 700m/min on 1.5sqmm insulation on longer insulation cycles.

**Catalyst Selection:** Possible to use different catalyst grades depending upon the extruder residence time, curing method and the choice of cross-linking speed.

**Optimized Physical and Electrical Properties:** With Shore D Hardness around 48, Tensile of 12 MPa, Elongation of 170%, good Hot deformation and Volume Resistivity characteristics, our XL-HFFR ECOTEK® SPL-ZHFR 6002XL/7000XL/8000XL offers well-balanced combination physical and electrical properties.

**Enhanced Flame Retardance:** Oxygen Index around 33%, the XL-HFFR ECOTEK SPL-ZHFR 6002XL/7000XL/8000XL compound provides good flame-retardant properties

**RoHS Compliance:** Complying with RoHS regulations, the compound is environmentally friendly and safe for use in various applications, aligning with modern sustainability standards.

