

FLAME RETARDAND: FRX – A107

Description

FRX-A107 is a modified organic phosphorus-based flame retardant designed for flame-retardant polyamides. It offers strong flame resistance and mechanical performance, with key benefits including low required dosage, reduced material density, and minimal smoke generation. At equivalent loading levels, it serves as a viable replacement for imported alternatives.



No plate-out under high temperature/humidity.



Better mechanical properties.



Stronger flame retardant efficiency, lower dosage levels.

Technical Data

| Property | Unit | Typical Value |
|--------------------|----------------------|---------------|
| Bulk Density | gram/cm ³ | 0.4 – 0.8 |
| Moisture | wt % | ≤ 0.5 |
| Phosphorus Content | wt % | ≥ 20 |



Typical Applications: Glass Fiber-reinforced PA6

FRX-A107 can directly replace the benchmark imported flame retardant at equivalent dosage levels in 30 wt% glass fiber-reinforced PA6 formulations—without requiring any changes to the existing recipe.

| Components | Benchmark Import Flame Retardant (wt %) | At a 1:1 Ratio Substitute by FRX-A107 (wt %) |
|-------------------------|---|--|
| PA6 | 53.4 | 53.4 |
| Short Glass Fiber | 30 | 30 |
| Foreign Flame Retardant | 16 | |
| FRX-A107 | | 16 |
| Lubricant | 0.3 | 0.3 |
| Antioxidant | 0.3 | 0.3 |
| Total | 100 | 100 |

| Property | Testing Protocol | Unit | Performance Results | |
|-----------------------|------------------|-------------------|---------------------|-------|
| Tensile Strength | GB/T 1040-06 | MPa | 138.2 | 138.9 |
| Flexural Modulus | GB/T 9341-08 | MPa | 7805 | 7815 |
| Notch Impact Strength | GB/T 1803-1-08 | kJ/M ² | 12.94 | 12.74 |
| Flame Resistance | UL94 | 1.6 mm | V-0 | V-0 |
| | | 3.2 mm | V-0 | V-0 |

Disclaimer

The property values presented herein are typical values and are not to be interpreted as specification limits. The information in this document is believed to be accurate and reliable as of the date of publication; however, it is provided for general guidance only. This document is intended to support safe handling, use, processing, storage, transportation, and disposal of the product, and does not constitute a warranty or guarantee of any kind—express or implied—including, without limitation, any warranty

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