



# Flame Retardant Solutions for Electrical & Electronics

Tosaf's advanced flame retardant masterbatches and compounds are specifically designed to meet the dynamic needs of the electrical and electronic (E&E) industry.

Suitable to a variety of polymers and compatible with E&E injection molding, **our solutions:**



Provide reliable fire safety

Maintain excellent mechanical properties

Comply with strict regulations and global standards

Ensure consistent performance for a variety of electrical components

Include a range of halogen-free solutions

## Polyolefins-Based Solutions

Product	Polymer	Type	Color	FR Standard
<b>FR4208PP EU</b>	Polypropylene	Halogenated Compound	Natural	UL 94 1.6mm - V0 GWFI (960°C/1.6mm)
<b>FR0538PPW EU</b>	Polypropylene	Halogenated Compound	White	UL 94 1.6mm - V0 GWFI (960°C/1.6mm)
<b>FR2086HP EU</b>	Polypropylene	Halogenated Compound	Natural	UL 94 1.6mm - V2 Needle Flame Test 1.6mm GWFI (960°C/1.6mm)
<b>FR6696PPK EU</b>	Polypropylene	Halogenated Compound	Black	UL 94 0.8mm - V2 Needle Flame Test 1.6mm GWFI (960°C/1.6mm)
<b>FR8911PP EU</b>	Polypropylene	Halogen Free Compound	Natural	UL 94 1.6mm - V0 GWT (960°C/1.5mm)
<b>FR9690PPK EU</b>	Polypropylene	Halogen Free Compound	Black	UL 94 1.6mm - V0 Needle Flame Test 1.6mm GWT (960°C/1.5mm)
<b>FR9937PP EU</b>	Polypropylene	Halogen Free Compound	Natural	UL 94 1.6mm - V2 GWT (750°C/1.5mm)
<b>FR9845PPO EU</b>	Polypropylene	Halogen Free Compound	Orange	GWT (850/1.5mm)
<b>FR6413PE EU</b>	Polypropylene	Halogenated MB	Natural	UL-94 V2 0.8-1.6mm (4-6%) UL-94 V0 1.6mm (18-22%) GWT 850°C (4%) LPS 1207
<b>FR8719PP EU</b>	Polypropylene	Halogen free MB	Natural	UL 94 - V2 1.6mm (3-6%)



## Styrene-Based Solutions

Product	Polymer	Type	Color	FR Standard
FR9393AB EU	ABS	Halogenated Compound	Natural	UL 94 - V0 1.6mm
FR9509ABK EU	ABS	Halogenated Compound	Black	UL 94 - V0 1.6mm
FR9380AB EU	ABS	Halogen free Compound	Natural	UL 94 - V0 1.6mm ECE R118 (Annex 6,7,8) > 2 mm
FR3916AB EU	ABS	Halogenated MB	Natural	FR UL 94 - V0 1.6mm (22-24%)
FR8974PS EU	HIPS	Halogenated Compound	Natural	UL 94 V0 1.6mm, 3.2 mm
FR2941PS EU	HIPS	Halogenated MB	Natural	UL 94 - V0 1.6mm (21-23%)
FR7895PS EU	HIPS	Halogenated MB	Natural	UL94 V2 (6-8%) GWFI 960c (8-10%)
FR0625SA EU	HIPS/ABS/ASA/PC+ABS	Halogenated MB	Natural	UL 94 - V0 1.6mm (26-28%)

## Our FR Lab

Tosaf operates a state-of-the-art flame retardant production facility, which is equipped with a laboratory that supports the development of innovative solutions.

### The laboratory:

- ✓ **Ensures compliance** with a wide range of fire standards.
- ✓ **Covers a range of fire tests:** UL-94, EUROCLASS, GWT/GWFI/GWIT, Needle flame test, Cone Calorimeter, NFP92, FMVSS 302, NFPA 701 Method 1, and Cable Vertical Flammability.
- ✓ **Is equipped with production pilots** such as blown extruders, cast extruders, pipe extruders, and injection machines.
- ✓ **Operates advanced devices** including FTIR, FT-NIR, XRF, DSC, TGA, LOD test, MFI, Density, Tensile & Flexural Modulus, Izod Impact & Charpy Izod, Ball Pressure, Spectrophotometer, and SEM.

## We are Tosaf

Tosaf has been developing and manufacturing high quality additives, compounds and color masterbatches for the plastics industry for over three decades. Aiming to provide customers with tailor-made solutions suited for their specific needs, we have continuously developed and expanded our offering, production capacity and worldwide reach, becoming a global organization that fosters close connections in every market.



For Further Information  
Please Contact Us:

[www.tosaf.com](http://www.tosaf.com)

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