



Thermoplastic semiconductive compounds for cable applications

Your trusted partner in delivering innovative material solutions for the most demanding needs. Our mission is to improve the quality and standard of materials needed in the energy sector.

PREMIX

Thermoplastic semiconductive compounds for cable applications

Semiconductive PRE-ELEC® compounds for cable applications

- PP (HPTE) compounds for conductor and insulation screens
- Semiconductive polyolefin based compounds for jacketing or skin layer
- Semiconductive elastomers for jacketing or skin layer
- Semiconductive thermoplastic adhesive compounds with good adhesion to copper and aluminium
- Semiconductive filler compounds for submarine and umbilical cables

PRE-ELEC® compounds for EMI shielding

- Housing
- Flexible EMI shielding

Toll compounding services

Need reliable production capacity for your polymer compounds?

As a trusted manufacturer of custom-made compounds, we provide contract manufacturing solutions with a versatile range of machinery capable of handling diverse production volumes and product specifications.

Our expertise lies in processing demanding materials, fillers such as carbon black, and thermoplastics in general.

Our production facilities in Rajamäki, Finland, and Premix Apple Creek, North Carolina, USA, deliver consistent quality and efficient logistics, backed by over 40 years of compounding expertise.

Let us manage your compounding needs with precision and reliability.

Semiconductive compounds for cable applications

Premix offers electrically conductive and other functional material solutions for cable applications and EMI shielding. PRE-ELEC® compounds exhibit premium dispersion and boast excellent surface characteristics, ensuring a consistently high level of quality.

PRE-ELEC® Grade Selection for cable applications

	Product	Polymer base	SR Ω	VR Ωcm	Special features
Power transmission cable compounds	PRE-ELEC® PE1291	PE-HD			Semiconductive PE-HD filler compound for submarine or umbilical cables.
	PRE-ELEC® PE19739	PE adhesive		20	Semiconductive adhesive compound with excellent adhesion to both copper and aluminum.
	PRE-ELEC® PE19935	PE-HD	1E+03	15	Semiconductive PE-HD jacketing compound with excellent surface quality and ESCR properties.
	PRE-ELEC® PP18220	PP	1E+03	25	PP (HPTE) conductor and insulation screen compound for high and medium voltage cables.
Special cable compounds	PRE-ELEC® PE19986	PE-LD	< 1E3	20	High quality semiconductive compound for special cables or LV-cables.
	PRE-ELEC® PE18381	PE-LD	9E+02	14	Highly flexible for dynamic loading applications with a low resistivity value.
	PRE-ELEC® PE18922	PE-LLD	8E+02	30	Good low temperature properties.
	PRE-ELEC® PP1397	PP	3E+03	60	Semiconductive compound for T3 automotive applications.
	PRE-ELEC® PP18380	PP		5	PP (HPTE) conductor screen compound with low resistivity value.
	PRE-ELEC® CP1319	EVA	3E+03	85	Soft semiconductive thermoplastic compound for flexible applications.
	PRE-ELEC® TPE1502	TPE	9E+02	15	TPE-compound with good mechanical properties and surface quality.
	PRE-ELEC® TPE18416	TPE	4E+02	3.5	TPE-compound with good mechanical properties and surface quality.
	PRE-ELEC® TPU1512	TPU-Es	8E+02	10	Ester-based TPU-compound with good mechanical properties.
	PRE-ELEC® TPU18025	TPU-Et	< 5E+02	<10	Ether-based TPU-compound with good mechanical properties.
PRE-ELEC® TPU18600	TPU-Es	6E+04	41	Ester-based TPU-compound with good mechanical properties.	

Coming soon!

Product
PRE-ELEC® PP (HPTE) strippable insulation screen for medium voltage cables.
PRE-ELEC® PP (HPTE) conductor and insulation screen compound for medium voltage cables.
PRE-ELEC® PE-HD filler compound for submarine and umbilical cables with high recycled content

PRE-ELEC® Grade Selection for EMI shielding applications

Product	Hardness ShD	VR Ωcm	SE (2 GHz, 3.2 mm) dB	Operating temperature °C	Base polymer	Flammability (UL94)	Elongation %	Suitable for
PRE-ELEC® PP17147	75	0.25	85	-20 to 130	PP	HB	1.5	Injection molding
PRE-ELEC® TP17499	79	0.4	64	-20 to 130	PP	V-0	1.5	Injection molding
PRE-ELEC® PP18147	58	0.6	54	-25 to 100	PP	HB	170	Extrusion



We are ready
to create a new
success story
with you!

ABOUT PREMIX

With more than 40 years of industry experience, Premix's expertise lies in the formulation and production of functional plastic materials. Premix's materials are more than just traditional plastics – they play an active role in the product or process they are integrated into. Premix was one of the first companies to enter the market for electrically conductive plastics in the early stages, and it is now the world's leading specialist in the area. PRE-ELEC® is a registered trademark of Premix Oy.

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