



Thermoplastic Semiconductive Compounds for Energy Sector

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

PREMIX

Thermoplastic Semiconductive Compounds for Energy Sector

Semiconductive compounds for cable applications

- PP semiconductive compounds for conductor and insulation screens
- Semiconductive PE-HD-based compounds for jacketing
- Semiconductive adhesive compounds with good adhesion to copper and aluminium

PRE-ELEC® compounds for EMI shielding

- Housing
- Flexible EMI shielding

Functional materials for energy storage

- Bipolar plates for flow batteries
- Electrolysers for hydrogen production
- Other functionalities

Semiconductive Compounds for Energy Sector

Premix offers electrically conductive and other functional material solutions for cable applications, EMI shielding and energy storage. PRE-ELEC® compounds exhibit optimal 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® PE19935	PE-HD	1E+03	10	Semiconductive PE-HD jacketing compound. Excellent surface quality and ESCR-properties.
	PRE-ELEC® PE18500	PE adhesive	1E+03	20	Semiconductive adhesive compound, good adhesion to copper and aluminium.
	PRE-ELEC® PE19739	PE adhesive		20	Semiconductive adhesive compound, good adhesion to copper and aluminium.
	PRE-ELEC® PP18220	PP	1E+03	25	PP-conductor and insulation screen compound for medium voltage applications. Good low temperature properties.
	PRE-ELEC® PP18380	PP		5	PP-conductor screen compound with low resistivity value.
	PRE-ELEC® PP18920	PP	5E+02	12	PP-insulation screen compound for medium voltage applications. Good low temperature properties.
Special cable compounds	PRE-ELEC® PE1271	PE-LLD	5E+03	70	High class semiconductive compound for special cables or LV-cables.
	PRE-ELEC® PE18381	PE-LD	9E+02	14	Highly flexible for dynamic loading applications. 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® 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.	

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

PRE-ELEC® Grade Selection for energy applications

Product	VR Ωcm	MFI, 230°C/21,6kg (100%)	Tensile strength MPa	Density (g/cm3)
PRE-ELEC® PP18698	<0,1	2	7.3	1.67



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. Today, we are a company that develops future solutions also for antimicrobial materials.

PRE-ELEC® is a registered trademark of Premix Oy.

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