Functional Plastic 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 neeed on energy sector.

PREMIX

Functional Plastic Compounds for Energy Sector

Functional materials for ***energy storage***

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

PRE-ELEC® materials for ***EMI shielding***

- Housing
- Flexible EMI shielding

Functional materials for ***cable applications***

- PP semiconductive compounds for conductor and insulation screens
- PE-HD-based compounds for conductive jacketing
- Conductive adhesive compounds with good adhesion to Cu and Al
- Thermoplastics for EMI shielding

Functional Plastic Compounds for Energy Sector

Premix offers electrically conductive and other functional material solutions for EMI shielding, energy storage and cable applications. Premix materials are highly dispersed and easily stretchable which makes the manufacturing of thin products easier.

PRE-ELEC® Grade Selection for cable applications

Product	Polymer base	SR Ω	VR Ωcm	Special features
PRE-ELEC® PE 18992	PE-LLD	8E+2	30	Flexible, good low T resistance
PRE-ELEC® PE 18381	PE-LD	9E+2	14	Flexible PE-compound, good processability and low resistivity
PRE-ELEC® PE 18500	PE adhesive	1E+3	20	Conductive adhesive compound, good adhesion to Cu and Al
PRE-ELEC® PE 18664	PE-HD	9E+2	20	Conductive HDPE jacket. Performance/cost optimized, good ESCR performance
PRE-ELEC® PP 1397	PP	3E+3	60	Conductive compound for T3 automotive applications
PRE-ELEC® PP 18220	PP	1E+3	25	Medium voltage PP-conductor & insulation screen.High flexibility, excellent low T resistance
PRE-ELEC® PP 18920	PP	5E+2	12	Medium voltage PP-conductor & insulation screen.High flexibility, excellent low T resistance
PRE-ELEC® PP 18380	PP		5	PP-conductor or insulation screen
PRE-ELEC® TPE 1502	TPE	9E+2	15	Excellent mechanical properties of the elastomer
PRE-ELEC® TPE 18416	SEBS	4E+2	3.5	Excellent balance of mechanical properties and easy to extrude
PRE-ELEC® TPU 1512	TPU-Es	8E+2	10	Excellent mechanical properties of the base elastomer
PRE-ELEC® TPU 18025	TPU-Et	< 5E+2	<10	Excellent mechanical properties of the base elastomer
PRE-ELEC® TPU 18600	TPU-ES	6E+4	41	Excellent mechanical properties of the base elastomer

PRE-ELEC® Grade Selection for EMI shielding applications

	Hardness	VR Ωcm	SE (2 GHz, 3.2 mm)	Operating temperature	Base polymer	Flammability (UL94)	Elongation	Suitable for
PRE-ELEC® PP 17147	"Hard", 76 ShD	0.25	85 dB	-20°C to 130°C	PP	HB	1.5%	Injection molding
PRE-ELEC® TP 17499	"Hard"	0.4 Ω	64 dB	-20°C to 130°C	PP	V-0	1.5%	Injection molding
PRE-ELEC® PP 18147	"Flexible", 58 ShD	0.6 Ω	54 dB	-25°C to 100°C	PP	N/A	170%	Extrusion

PRE-ELEC® Grade Selection for energy applications

	VR Ωcm	MFI, 230°C/21,6kg (100%)	Tensile strength	Specific gravity (g/cm3)
PRE-ELEC® PP 18698	<0,1 Ω	2	7.3 MPa	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.

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