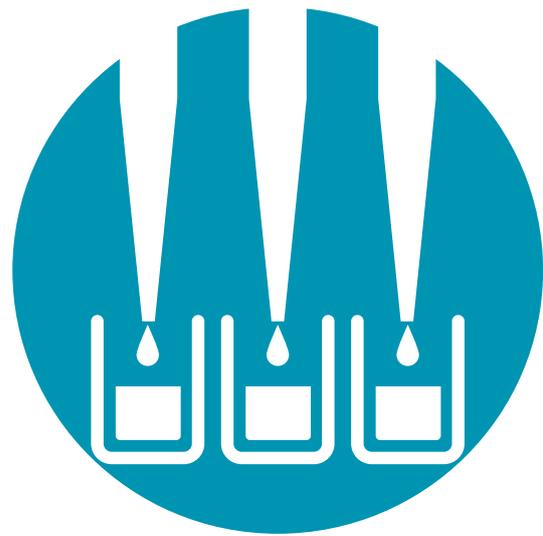


# ELECTRICALLY CONDUCTIVE PLASTICS

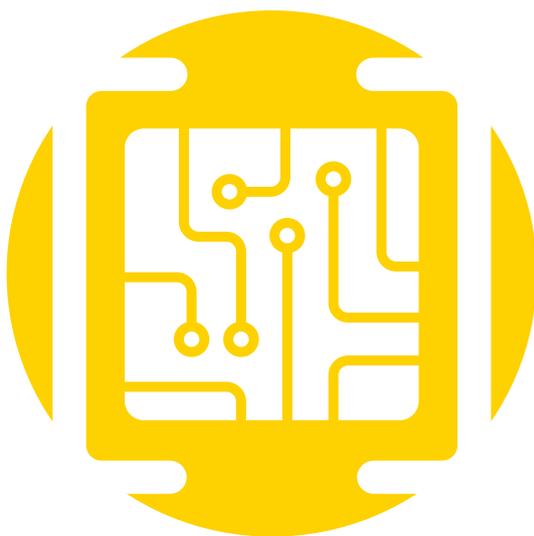
LET'S MAKE A GOOD MIX



**Automotive**



**Healthcare &  
wellbeing**



**Electronics  
packaging**



**Industrial**

**Since 1983 – when our first conductive plastic formulation was created – we have worked our way to be the world’s leading specialist of electrically conductive plastics.**

**We know our business, but this is not enough. We want to know your business, too. Strong partnerships with customers and leading institutes are our way of finding shorter and faster roads to Success.**

**To put it in short:**

$$**S = 17.000 + ( U_B \times ( R\&D ) )^{pp}**$$

**Check out the building blocks of our formula and join us on the journey to Success!**



Unlike normal plastics, conductive plastics have the ability to conduct electricity.

When grounded, conductive plastics remain in zero potential and do not accumulate static electricity.



Automotive



Healthcare & wellbeing



Electronics packaging



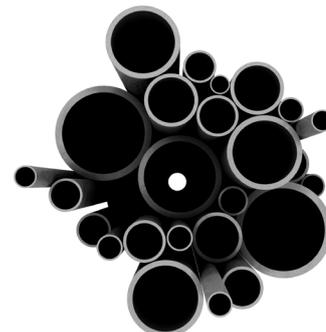
Industrial



Electrically conductive plastic ensures safe fuel handling in automotive fuel filler systems. PRE-ELEC® PE compounds bear unique advantages compared to competing solutions; clearly improved material flow for blow molding process combined with fuel resistance and high electrically conductivity.



Electrically conductive pipette tips enable liquid level detection in in vitro diagnostics. PRE-ELEC® PP compounds have been developed in close co-operation with the diagnostics industry. The product features and change management procedures meet the industry's standards.



Electrically conductive pipes secure a safe and non-explosive environment in the chemical, processing and mining industries. PRE-ELEC® PE and PP compounds and concentrates provide a lightweight solution with increased service time and better corrosion resistance compared to traditional metal pipes.

## WHY CONDUCTIVE PLASTICS?

### Electrostatic discharge (ESD)



When handling sensitive components, component safety is essential. Electrically conductive and static dissipative plastics protect components from failure and breakage caused by uncontrolled electrostatic discharge (ESD) in production and logistics. This will guarantee a longer operating life for electronic devices.

### Explosive atmospheres (ATEX)



Ensuring people and environment safety is the key issue when vapors, gases and dusts are processed, transported and used. Electrically conductive plastics are ATEX applicable plastic materials, since they fulfill ATEX's surface resistance requirement.

### Healthcare & wellbeing



Health is the most valuable thing in the world. There is no room for mistakes in health- and wellbeing-related operations. Electrically conductive plastics are key materials in in vitro diagnostics and body monitoring technologies. They will perform correctly, every time.

### Metal replacement

Due to lighter weight, good processability and optimal combination of mechanical properties, plastics have come to challenge metals in many applications, e.g. grounding and electrostatic painting.

### Challenge us!

There are also many other creative ways to utilize conductive plastics: fuel cell technology, batteries, level detection, air-cleaning, stick and dust prevention to mention a few.

Together we can explore new innovative ways of using conductive plastics!

### May we introduce Mr. Premix?



**We introduced the first conductive compound among the first in the world.**

**Over the years, PRE-ELEC® product family has emerged to cover the whole resistance spectrum and a wide variety of base polymers.**

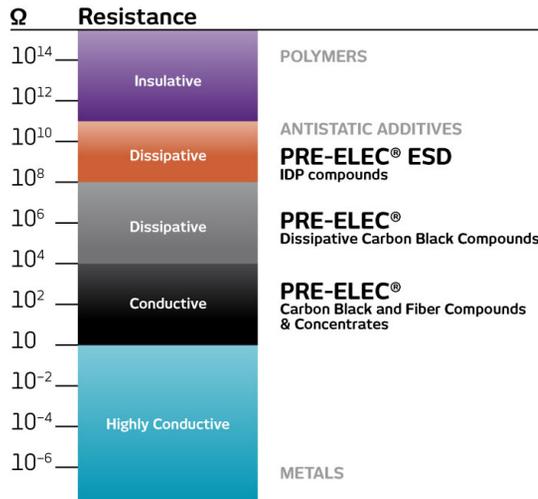
**PRE-ELEC® – Conductive and dissipative carbon black compounds**

Carbon black has established position as the most widely used conductive filler. It offers the superior price-performance ratio and stable properties over the time. Typical resistance range for carbon black compounds is between E2 and E5 ohms.

Due to the nature of carbon black, reaching a dissipative surface resistance level above E5 ohms is a difficult task. We have successfully overcome this challenge with special resistance control technology and offer static dissipative PRE-ELEC® compounds between resistance range E5 and E8 ohms.

**Boost your business with conductive concentrates**

Carbon black concentrates are an excellent way to reduce the raw material costs. In PRE-ELEC® concentrates, the carbon black content has been optimized to the highest possible level. To ensure maximum cost efficiency, recycled plastics or regrind from your own processes can be used for dilution. One small, yet innovative step, can lead to significant cost savings.



Premix's comprehensive product portfolio covers the plastics resistance spectrum from conductive up to static dissipative area.

Besides the economical advantage, concentrates also allow the modification of product properties. To impart stiffness and strength to the finished product, the reinforced plastic can be used for dilution. One may also modify the flame-retardant properties by including a flame-retardant masterbatch in the process.

**Carbon fiber compounds for high stiffness and non-marking**

As a conductive media, carbon fiber is justified, especially in applications requiring high rigidity and non-marking material.

**PRE-ELEC® ESD – Inherently dissipative compounds**

Inherently dissipative polymers (IDP) come forward when translucency, cleanliness, non-sloughing properties are essential. PRE-ELEC® ESD compounds and masterbatches enable permanent surface resistance levels from E8 to E12 ohms and their functionality is not dependent on humidity levels.

We want to create

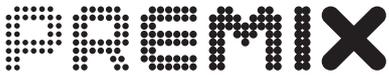
# MATERIALS THAT MATTER!

Our material solutions “...guaranteed the superior functionality of a complex technological process.”  
and “...opened completely new markets through exceptional performance leap.”

These success stories emerge from long-term customer partnerships.

Let's get your success story started.





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