



# Permanent Conductivity for Safer Fueling Systems

## **Background**

A global leader in fuel piping systems for gas stations, needed to ensure **long-term safety and static-free operation** in multilayer fuel pipelines. Eliminating electrostatic build-up is critical to preventing sparks that could lead to fires or explosions.



## Challenge / Need

To meet ATEX (EU), UL (US), and GB (China) explosion-proof requirements, the company required a conductive interlayer for its five-layer pipe that offered:

- Interlayer compatibility for strong adhesion within the multilayer structure
- Processing stability: precise melt-flow, thermo-oxidative stability, and controlled crystallization and shrinkage rates during co-extrusion
- Functional reliability: stable, permanent surface conductivity over years of service in harsh outdoor environments



Premix provided **PRE-ELEC® TP 11820**, a high-density polyethylene (HDPE) compound engineered with **special conductive carbon black** to deliver:

- Low surface resistivity (<10<sup>4</sup> Ω/sq) ensuring permanent static-dissipative properties
- Excellent mechanical properties for strength and durability
- Outstanding processability—ideal melt-flow index and thermal stability for multilayer pipe co-extrusion and welding
- Certified compliance with ATEX, UL, and GB safety standards
- This material forms the critical fourth layer of company's five-layer fuel pipe, providing a continuous conductive path to safely dissipate static electricity.



### Results / Benefits

- Enhanced Safety Permanent conductivity protects against static discharge, reducing fire and explosion risk.
- Proven Reliability Years of successful global field use with stable ESD performance.
- Competitive Advantage ATEX/UL/GB certifications and stable quality give the company a strong position in project bids.

#### Get in touch with us

Whether you have questions about our wide range of plastic compounds and materials or need assistance, our team is here to help.

Contact us

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