



## Fluon® ETFE Resin and Conductive Carbon Black – Perfect Together

Fluon® ETFE is a melt-processable copolymer of tetrafluoroethylene and ethylene that possesses a unique combination of desirable properties, such as high resistance to heat, chemical attack and outstanding physical toughness. These attributes make Fluon® ETFE an ideal resin for conductive carbon black to create a wide variety of specialty products.

- **Self-regulating Heater Cable** takes advantage of Fluon® ETFE's crystalline structure and high heat resistance to prevent pipes from losing heat at high operating temperatures. The conductive carbon network embedded in the Fluon® ETFE matrix allows the cable to heat up, eventually causing the ETFE to melt. As it melts, the softening resin interferes with the carbon network, shutting off the flow of electricity and allowing the resin to cool. The ETFE then re-crystallizes, establishing the carbon network and starting the process all over again. This self-regulating on/off effect can occur millions of times over the life of the cable.
- **Automotive Fuel Hose** takes advantage of Fluon® ETFE's resistance to chemical attack, resistance to permeation and physical toughness in the harsh environment of automobile and truck engines. The conductive carbon network in the Fluon® ETFE allows static to dissipate, protecting the volatile fuels from static discharge, while the tough but flexible ETFE protects the hose from vibration, heat and fuel permeation.
- **Cross-linkable Cable Jackets** take advantage of Fluon® ETFE's toughness and compatibility with certain plasticizers to make an extremely tough and flexible cable jacket. Conductive carbon black is added to the plasticized ETFE for good static dissipation. When extruded over a sensitive shielded cable the conductive, plasticized Fluon® ETFE insures protection from static and abrasion in harsh environments.

