

# **Electrical**

There's a plastic to meet every standard and use for electrical applications. The next time you need a stable, impact-resistant, easy-to-process, safe material, think plastics.

### **Applications**

- Wire and cable insulation
- Plenum-rated wire and cable jacketing
- Arc shields
- Test boards
- Circuit boards, rinted-wiring boards
- Connectors data, automotive, telecommunications, fiber optic
- High-voltage circuit-breaker housings
- Aircraft electrical insulators
- Radar gun lenses
- Electronic test sockets and fixtures
- Conduits

### **Advantages May Include**

- Strong, high impact resistant
- Thermoformable
- Nonconductive; resistant to electricity
- Can be made static dissipative or fully conductive
- Inherently good insulator
- Chemical, UV, abrasion resistant
- Temperature resistant
- Hydrolytic stability
- Low flammability and smoke generation
- High creep resistant

#### **Materials**

- Ethylene-Chlorotrifluoroethylene (ECTFE)
- Ethylene Tetrafluoroethylene (ETFE)
- Fluorinated Ethylene Propylene (FEP)







- Perfluoroalkoxy (PFA)
- Polyamide-Imide (PAI)
- Polyetheretherketone (PEEK)
- Polyetherimide (PEI)
- Polyethersulfone (PES)
- Polyimide (PI)
- Polyphenylene Ether, Modified (PPE)
- Polyphenylene oxide (modified PPO)
- Polyphenylene Sulfide (PPS)
- Polypropylene (PP)
- Polytetrafluoroethylene (PTFE)
- Polyvinyl Chloride (PVC)
- Polyvinylidene Fluoride (PVDF)
- Styrene Maleic Anhydride-Polycarbonate (SMA-PC)
- Thermoplastic Polyesters —
   Polybutylene Terephthalate (PBT),
   Polythramethylene Terephthalate
   (PTMT), Polyethylene Terephthalate
   (PET)
- Thermoset Industrial Laminates —
   Epoxy, Melamine, Silicone, Polyester, Industrial Thermosets (Phenolics) Paper and Cotton Grades
- Vulcanized Fibre

# Did you know?

The first synthetic plastic developed for the electrical/electronics industry, Bakelite, was created to replace Shellac, a resin secreted by the female lac bug in India and Thailand.



# **Environmental and Safety**

Considering the total carbon footprint, including costs of raw materials, manufacture, transport, fabricate, install, maintain, plastics compare favorably with more traditional materials. Also, plastics are safer to handle and install. When you consider that most plastics are readily recyclable, they can become the most environmentally responsible and safest choice for many demanding electrical applications.





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