**General Properties & Characteristics   
of Plastic Families**

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| **Plastic** | **Characteristics / Properties** |
| **ABS  (Acrylonitrile-butadiene-styrene)** | Rigid, low-cost thermoplastic, easily machined and thermo-formed. |
| **Acetal** | Engineering thermoplastic with good strength, wear resistance, and dimensional stability. More dimensionally stable than nylon under wet and humid conditions. |
| **Acrylic** | Clear, transparent, strong, break-resistant thermoplastic with excellent chemical resistance and weatherability. |
| **CPVC (Chlorinated PVC)** | Thermoplastic with properties similar to PVC, but operated to a 40-60°F higher temperature. |
| **Fiberglass** | Thermosetting composite with high strength-to-weight ratio, excellent dielectric properties and unaffected by corrosion. |
| **Nylon** | Thermoplastic with excellent impact resistance, ideal for wear applications such as bearings and gears; Self-lubricating under some circumstances |
| **PEEK (Poly-ether-ether-ketone)** | Engineering thermoplastic, excellent temperature resistance, suitable for continuous use above 500°F, excellent flexural and tensile properties. |
| **PET (Poly-ethylene-terephthalate)** | Dimensionally stable thermoplastic with superior machining characteristics compared to acetal. |
| **Phenolic** | Thermosetting family of plastics with minimal thermal expansion, high compressive strength, excellent wear and abrasion resistance and a low coefficient of friction. Used for bearing applications and molded parts. |
| **Polycarbonate** | Transparent, tough thermoplastic with high impact strength, excellent chemical resistance and electrical properties, and good dimensional stability. |
| **Polypropylene** | Good chemical resistance combined with low moisture absorption and excellent electrical properties. Retains strength up to 250°F. |
| **Polysulfone** | Durable thermoplastic, good electrical properties, operates at temperatures in excess of 300°F. |
| **Polyurethane** | Thermoplastic, excellent impact and abrasion resistance, resists sunlight and weathering. |
| **PTFE (Poly-tetra-fluoro-ethylene)** | Thermoplastic with a low coefficient of friction, withstands heat up to 500°F, inert to chemicals and solvents, self-lubricating with a low thermal expansion rate. |
| **PVC (Poly-vinyl-chloride)** | Thermoplastic, resists corrosive solutions and gases both acid and alkaline, good stiffness. |
| **PVDF (Poly-vinyl-idene-fluoride)** | Thermoplastic, outstanding chemical resistance, excellent substitute for PVC or polypropylene. Good mechanical strength and dielectric properties. |