



ESSENTRA

FASTENER MATERIALS SELECTION GUIDE

Material is a critical factor in delivering successful projects, from creating point of sale displays to building a new electrical cabinet. With fasteners available in a vast range of materials, it can be hard to pick a perfect fixing solution for your application.

Our guide offers advice on choosing the appropriate fastening material based on your specific application and environment.

So whether you are choosing **washers, spacers, screws, nuts, rivets** or other **fasteners**, the table below will help you make an informed decision for your project.

Material	Temperature Stability	Strength	Mechanical Resistance	Impact Resistance	UV Protection	Acids/Alkaline Resistance	Weather Resistance	Heat Resistance	Flame Resistance
Nylon	Good	Good	Good	Poor	Poor	Poor	Poor	Poor	Poor
PP	Good	Poor	Poor	Poor	Poor	Good	Poor	Poor	Poor
PVDF	Good	Poor	Good	Poor	Good	Good	Good	Good	Good
Polycarbonate	Poor	Good	Poor	Good	Good	Poor	Good	Good	Poor
POM	Poor	Poor	Good	Poor	Poor	Poor	Poor	Good	Poor
TPE	Poor	Poor	Poor	Poor	Poor	Poor	Poor	Poor	Poor
PEEK	Good	Good	Good	Good	Poor	Good	Good	Good	Good

SOME KEY APPLICATION EXAMPLES:

- **Point of Sale and Display** – **Polycarbonate** is a key material within this industry due to its strong nature twinned with its transparent appearance.
- **Pharmaceutical** – **Polypropylene** (PP) has great resistance to many chemicals and can be easily welded to other PP components, providing versatility.
- **Electrical** – With high temperature stability, heat and flame resistance, **PVDF** lends itself well to use in a working electrical application or electrical cabinet.
- **Oil and Gas** – In an often moving and volatile application, **PEEK**[®] material fasteners offer high tensile strength, flame resistance and can operate continuously in temperatures up to 180°C.
- **Automotive and Manufacturing** – Tough and mechanically resistant, **Nylon** fasteners are lighter, less expensive alternatives to metal equivalents. For added UV resistance a **PVDF** component is more appropriate.

For more advice about our extensive range of fasteners and materials, please call us on on **+91 80 4545 3676** or email **sales@essentracomponents.co.in**