Our Enhanced Materials Division (EMD) positions TriStar Plastics as the best resource to solve your demanding engineering challenges. From expert material selection guidance to material enhancements that improve and extend the performance of existing polymers and elastomers, we can help you find the best, most cost-effective way forward.

### Surface Enhancements

<table>
<thead>
<tr>
<th><strong>Plasma</strong></th>
<th><strong>Coatings</strong></th>
<th><strong>Parylene</strong></th>
<th><strong>Primers</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>This technology utilizes highly-energetic gases to manipulate the surface of nearly any material. Highly effective in influencing adhesion, wettability, non-stick or inertness.</td>
<td>Specialized coatings can be employed to inhibit corrosion, enhance adhesion, and for non-stick or lubricious applications. Coatings can streamline manufacturing and enhance assembly performance.</td>
<td>Parylene is the generic name used to describe a family of polymers based on polyxylene. It is a conformal coating applied in thin layers (a few mils/fractions of mm) using a variety of methods.</td>
<td>Primers are compound mixtures that prepare surfaces for coating, paint, or adhesive. They are effective for rubber overmolding applications and improving material bonding and de-tack outcomes.</td>
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</tbody>
</table>

### Engineering Services

<table>
<thead>
<tr>
<th><strong>Material I.D.</strong></th>
<th><strong>Material Selection</strong></th>
<th><strong>Process Engineering</strong></th>
<th><strong>Analysis/Testing</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Rely on us to analyze components that you have on hand to see what they are made of. An example where this would be useful is if a part broke off a machine (or just wore out) and you need to know what it is so you can replace it with the same (or better) material.</td>
<td>We draw on many years of combined material engineering expertise to help you specify the best material for your projects. Regardless of your application, we can help you choose the right material for the operating conditions and desired service life.</td>
<td>For companies that have overworked engineering departments or lack engineering resources altogether, we can become an extension and support resource to help implement new designs or develop better manufacturing processes.</td>
<td>We offer expert advice and analysis on CAD design projects and our testing labs can help you evaluate processes and end results. Evaluation technologies employed include: Tribological testing, TGA, and DSC.</td>
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</table>

### Innovative Product Offerings

<table>
<thead>
<tr>
<th><strong>Adhesives</strong></th>
<th><strong>Primers</strong></th>
<th><strong>Membranes</strong></th>
<th><strong>Specialized Materials</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Adhesives are substances that unify materials through millions of tiny interactions that result in massive macro-binding bulk properties. Our offerings include epoxies, urethanes, acrylics and special alloys of each of those types.</td>
<td>Primers are the link between material and adhesive. When a better bond is needed, the primer improves the bond between the material and the adhesive. We offer standard primer types and custom formulations to promote specific results.</td>
<td>These are asymmetric and symmetric polyether sulfone membranes and glass membranes most often specified for water filtration applications. Common uses are for food processing and residential water treatment.</td>
<td>Our vast material engineering experience enables us to offer innovative materials that may not even have fully been brought to market yet. This helps us recommend materials for projects with very specific performance requirements.</td>
</tr>
</tbody>
</table>
Cj Composite

- Self-Lubricating
- Low weight | High Strength
- Chemical Resistance
- Direct replacement for Bronze

Ultracomp®

- Self-Lubricating
- High Load | Low Speed
- 54,400 PSI Compressive Strength
- Exceptional Resistance to Vibration and Impact

TriSteel™

- Self-Lubricating
- High Load | High Speed
- Metal Backed Bearing System
- 100% Lead Free

Rulon®

- Self-Lubricating
- Low weight | High Strength
- Low Coefficient of Friction
- Chemically Resistant

We’re ready to put our engineering expertise to work for you from prototype to production.

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