Application Note

Land Mobile Satellite TV

Problem

A major mobile satellite antenna manufacturer required a lightweight and reliable waveguide. The OEM selected PC/ABS, which required very precise thickness of Nickel plating over Copper to provide the needed antenna properties.

Cybershield Solution

Cybershield teamed with the OEM to develop the precise plating processes to achieve consistent plating thickness on every waveguide. PC/ABS was specified due to its low cost, high impact strength and ability to be plated. Cybershield applies all-over electroless plating with over 200 micro-inches (5.0 µ) total plating thickness onto the 12” x 20” molded waveguide.

Cybershield manages the supply chain, ordering the molded waveguides, tapping 4 precision threaded holes and applying the electroless plating. This streamlines the customer ordering process so that they only need to contact Cybershield for all ordering and scheduling of finished plated waveguides.

Many other plastic resins are compatible with Cybershield plating processes.

<table>
<thead>
<tr>
<th>Plateable Resins – Consult Cybershield for details</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABS, PC/ABS, Polycarbonate, Polyetherimide (Ultem), Syndiotactic Polystyrene (SPS), Noryl, Polypropylene, Polyphthalamide, Polyethersulfone (PES), LCP, Xylex, Urethane, Nylon, Epoxy, Polyetheretherketone (PEEK),</td>
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For more information about this application, Cybershield capabilities and/or to review your application requirements for metallized plastic, contact Cybershield
Cybershield
308 Ellen Trout Drive
Lufkin, TX 75904
214-227-3680
Email: sales@cybershieldinc.com

- Fabricate a full range of EMI shielding solutions – Electroless Plating and Conductive Paint
- Electroplating Copper, Nickel, Trivalent Chrome, including decorative plating on plastics and metal
- Offer engineering design assistance – plastic resin selection, metal coating specification and mechanical design recommendations
- Serve applications in volumes from 25 units per month to millions of units per month
- Provide extensive mechanical assembly services to its customers
- Manage entire supply chain, including plastic injection molding to provide customers with turnkey solutions, designed and manufactured to strict OEM requirements

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<th>EMI Shielding, ESD and Electroplated Coatings</th>
<th>Assembly Services</th>
</tr>
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<tr>
<td>All-over &amp; Selective Coverage</td>
<td>Dispensed Gaskets (Conductive or Environmental)</td>
</tr>
<tr>
<td>Electroless Plating Copper, Nickel, Tin, Gold</td>
<td>Insert Installation (Ultrasonic or Heat Staking)</td>
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<tr>
<td>Electroplating Copper, Nickel, Trivalent Chrome</td>
<td>Decorative Paint</td>
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<td>Conductive Paint</td>
<td>Mechanical Assembly</td>
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Other Cybershield Plastic Metallization Systems

- Plated Plastic Router Chassis
- Plated Plastic RF Filter Housing
- Plated Plastic Shielded Connectors
- Military Electronic EMI Shielding