Hyundai Mobis IP Core Part Development Project

The Hyundai Mobis IP Core Part Development Project has completed a 19-month long series of tests comparing PC/ABS with a new polypropylene material filled with 3M™ Glass Bubbles iM30K for use in molding automotive instrument panel core parts. According to Mr. S. Ka, Research Engineer for the Cockpit Module Design project, the use of 3M iM30K glass bubbles has demonstrated a number of important advantages.

“We were exploring new material formulations that would help reduce overall part weight and costs in the production of instrument panel core parts,” explains Ka. “Using the polypropylene material that contained 3M iM30K glass bubbles, we achieved a 16.8% weight reduction and the finished part cost was 50% lower than PC/ABS IP cores. In addition, we experienced improved material flowability than PC/ABS and better dimensional stability compared to current talc filled polypropylene.”

Project Summary

<table>
<thead>
<tr>
<th>Materials Used</th>
<th>Features</th>
<th>Cost Reduction</th>
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<tbody>
<tr>
<td>Talc filled polypropylene</td>
<td>• 16.8% weight reduction vs. PC/ABS</td>
<td>Total part cost is 50% less than current PC/ABS model</td>
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<tr>
<td>3M™ Glass Bubbles iM30K</td>
<td>• Improved dimensional stability</td>
<td>IP Core Part</td>
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<td></td>
<td>• Reduced part warpage</td>
<td>Cost reduction is based on price of materials in Korea</td>
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<td></td>
<td>• Improved material flowability in mold</td>
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<td></td>
<td>• Allowed use of existing tooling</td>
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More Information

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