

COATING BERYLLIUM COPPER NIBORE™ Solves Leaching Problem

THE CHALLENGE

Beryllium copper lends itself well as a material for plastic injection molds. Its heat transfer properties aid release, reducing cycle times and making the alloy especially effective for complex molds.

For that reason, **MOS Plastics** used beryllium copper for the mold microplates it designed and built for a medical device customer.

“They have a very complex geometry,” says Rob Zimmerman, Engineering Manager at **MOS Plastics**, a high-precision, custom plastic injection molded parts manufacturer. “The tooling comprises six tooling elements that fit like a jigsaw puzzle and form the features in the molded part.”

However, a problem arose as the customer started production. Traces of copper were leaching into the product, contaminating it and rendering it nonfunctional.

Acting quickly to resolve the issue, **MOS Plastics** sought to coat the tool. “We needed a barrier between the base copper and parts we were molding,” Zimmerman says.

THE SOLUTION

Unfortunately, there was no easy solution. The company tested a variety of different coatings from different platers, but none kept the copper from migrating to the plastic.

The story was different once **MOS Plastics** approached the **Bales** team.

After listening and asking many questions, Dean Tufano, **Bales** Technical Service Manager, conducted some research and consulted **Bales**’ in-house chemist. Ultimately, he recommended lightly glass beading and masking the tooling to create buildup in an undersized area, then coating the tooling with **NIBORE™**, our exceptionally hard nickel coating.

THE RESULT

That process brought success. **NIBORE™** provided the protection needed to stop the copper from leaching. **MOS Plastics** has relied on Bales ever since. “They’re now using our process for continued success on this project,” Tufano says.

Zimmerman appreciates the “above and beyond” attention. “**Bales**’ customer service has been fantastic,” he says. “They are extremely responsive to our needs, turning things around quickly, whether quotes or the plating process.”

No matter what challenge you face with your molds, **Bales** will deliver the right solution, on time, with the highest of standards. For more information about our finishing and coating solutions, visit BalesUSA.com.



“Bales’ customer service has been fantastic.”

Rob Zimmerman
Engineering Manager
MOS Plastics

We Finish What Others Start.

Bales Metal Surface Solutions • 2824 Hitchcock Avenue, Downers Grove, IL 60515 • 630.852.4665 • BalesUSA.com