

# Why TM 103 and TM117C are Perfect for Mold Components

By Mindy Reed, Nickel Division Leader

We often get calls from people in the molding industry looking for coatings that will enhance the functionality of their molds. The first question we ask is "What is it you're trying to improve. Release, wear or finish?" The answer that comes back most is "Yes!" If you need the same things...here are a few solutions Techmetals can deliver.

**TM103.** A proprietary high phosphorus formulation of electroless nickel that provides an extremely uniform deposit (.0001 per .001 of deposit) even into deep recesses. It

#### **TM103 Advantages:**

- **Extremely uniform deposit**
- **Mirrors the finish of the base metal**
- **Protects molds from corrosion**
- **48-50 Rc Hardness**

also has the ability to nearly mirror the finish of the base metal which helps ensure

that the finish on the mold will duplicate the original surface. TM103 is formulated within strict control parameters with phosphorus content being the key controlling factor. Because Phosphorus is the primary factor of corrosion resistance, this deposit provides excellent protection against the corrosive fumes produced during the molding of such plastics as ABS, PVC, acrylics, and other materials with similar corrosive additives. It has a high hardness, 48-50 Rc as plated, and at high temperatures TM103 is able to minimize the effects of erosion and abrasion of molds and dies.

**TM117C.** A coating with all of the benefits of TM103, however, our lab has creatively introduced teflon into its chemistry, further enhancing the release characteristics of a mold. TM117C is extremely useful in applications where sensitive equipment prohibits the use of conventional lubricants. Many

conventional coatings have lubricants "impregnated" into the surface of base coatings. This is typically done by cracking the base coating and forcing a lubricant into the cracks. This process creates the possibility of not only corroding the base material but after a few uses the lubricant is worn out. With TM117C as the composite wears a constant supply of new particles is exposed, which helps maintain uniform properties.

Both TM103 and TM117C can

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be applied to many different base metals, including but not limited to Steel, Stainless, Aluminum, Titanium.

Copper and Brass. They both comply with FDA and USDA regulations.

Techmetals has large capacities, can provide quick turn around and also offer weld and polish operations for refurbishing.

The next time you need an economical way to improve and extend the life of your mold, consider giving one of these coatings a try. Feel free to contact our sales staff for more information or visit our website at [info@techmetals.com](mailto:info@techmetals.com). ●