

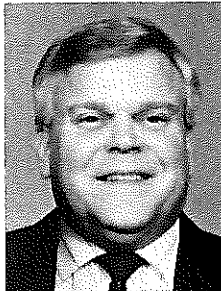
"What is Teflon Nickel and how can it help me?"

by Steve Deisher, Director of Marketing and Sales

Electroless nickel has been recognized for some time as having excellent release characteristics. It is frequently used in the plating of complex components and tools such as injection molds where tight tolerances must be maintained.

Electroless nickel's ability to plate uniformly makes this coating ideal. The release characteristic can be further improved with the introduction of PTFE or Teflon™ particles to the process.

There are two basic ways electroless nickel and PTFE particles are combined; first is an impregnation process, and the second is a co-deposition process. During the impregnation process, teflon particles are infused in the surface of the electroless nickel coating after the part has been plated. This enhances the break-in period for highly polished, critical surfaces of the molding cavity or core (TM117P).



During the co-deposit process, teflon particles are actually plated along with the electroless nickel and become part of the plated coating itself. This provides for greatly enhanced lubricity throughout the life of the coating. As the coating wears, new PTFE particles are continuously exposed. Unlike the impregnation

process, the Teflon particles are present throughout the entire thickness of the plating in the co-deposition process. This process is excellent for release enhancement on any surface, with the exception of those which are highly polished. This process is known as TM117C.

Other compounds may be co-deposited with electroless nickel, such as silicone carbide which provides superior wear and abrasion resistance (TM135). Teflon particles can also be impregnated into hard chromium plating (TM 119), enhancing the deposits release characteristics, while maintaining the benefit of high hardness and wear release. When Teflon is combined with electroless nickel plating, and even hard chrome, good release characteristics become even better.

