

ENhanced SiC

Another in Anoplate's family of Engineered Electroless Nickel Coatings

Quality Finishing and
Support Operations.
Since 1960.

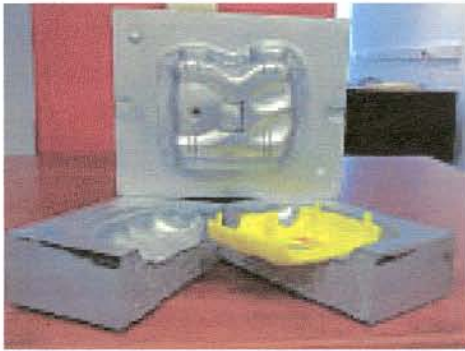
ANOPLATE

Product Description

- ▶ Micron-sized, ceramic hard particles of highly abrasion resistant silicon carbide randomly dispersed in a matrix of corrosion resistant and lubricious electroless nickel
- ▶ 100% particle occlusion during plating ensuring particulate retention and adhesion; no powdery surface
- ▶ Appealing metallic luster appearance with no smut or rough feel to coating
- ▶ Provides a tough surface to withstand high loading and erosive wear from abrasive environments
- ▶ Contains blend of abrasion resistant and corrosion resistant properties
- ▶ Can be thermally treated to increase hardness of nickel phosphorus alloy matrix to an equivalent hardness of 60-65 Rockwell C

Suggested Applications

- ▶ To reduce abrasive wear on glass filled plastic injection molds



- ▶ Replacement for chromium plating where chrome use is restricted or where chrome will not cover well
- ▶ Provide corrosion resistance in aggressive wear environs such as slurry pumps and food processing



Typical Physical Properties

Phosphorus Level: 5-9% by Weight

Carbide Level: ~ 20 % by Volume

Appearance: Shiny metallic luster

Particle Hardness: 4,500 Vickers

Matrix Hardness: 550 HVN₁₀₀ As-deposited
1000 HVN₁₀₀ Heat Treated

Temperature Limits: -200 to 400° C
(-392 to 752° F)

Summary

ENhanced SiC provides the exceptional hardness of a ceramic particle entirely encapsulated in a corrosion resistant envelope of nickel phosphorus plating to overcome the rigors of abrasive wear.