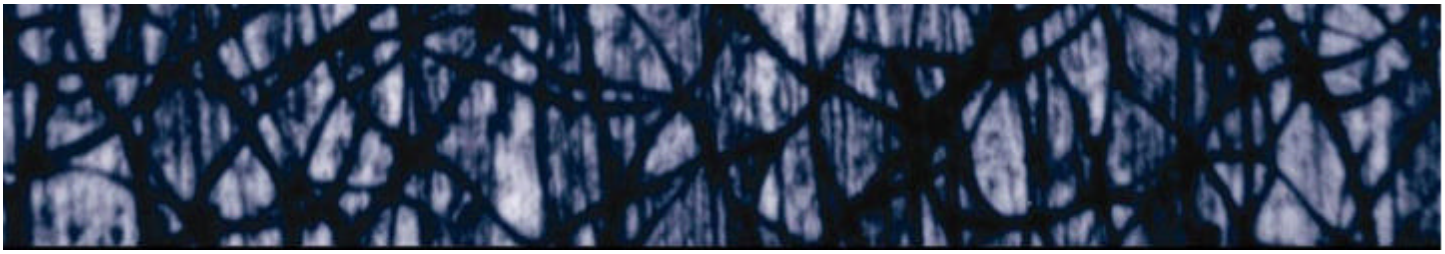

TM 125 (Amorphous Cobalt Coating)

Techmetal 125 is a high technology coating that at last brings together the best properties of hard chrome and electroless nickel into one coating. This alloy of cobalt and phosphorous has an amorphous, glass-like structure that provides the enhanced functional characteristics of this coating.

Techmetal 125 coatings provide hardness, wear, corrosion resistance and lubricity. It can be plated to thicknesses of at least 0.250 inches.

USER BENEFITS

Amorphous, Glass-like Structure
Increased Wear-Life of Parts
Machinability
Use for Salvage
Superior Corrosion Resistance
Good Lubricity
Easily Ground
Use for Electroforming

PROPERTIES	TYPICAL VALUE
Composition	86% Cobalt; 14% Phosphorous (by weight)
Coefficient of Friction	0.8
Corrosion Resistance	
-Neutral Salt Spray (ASTM B-117)	1000+ hours at .001 thickness
Copper Accelerated Salt Spray	
-CLASS (ASTM B-368)	200+ hours at .0003 thickness
RCA Nitric Acid Test	10 Minutes without attack
Thickness Controllability	
(Edges and sharp corners will build up faster)	+/- 10%
Minimum Thickness	.0001 inch
Maximum Thickness	at least 0.250 inch
Hardness	
-As Deposited	Rockwell C 63/65
-Baked 650 degrees F / 3 Hours	Rockwell C 68
-Baked 750 degrees F / 1 Hour	Rockwell C 70
Melting Point	1700 degrees F
Density	8 grams/cm3 (.289 pounds/inch 3)
Internal Stress	Neutral
Tensile Strength	
-As Deposited	130 KPSI
-Heat Treated	300 KPSI
Ductility	2% elongation
(Can be increased to 7% with some loss in hardness)	
Wear Rate	Similar to Hard Chrome Deposits

APPLICATIONS

This Techmetal coating is best suited for applications were both high hardness and high corrosion resistance are desired. It is especially suited for aluminum substrates where the melting point or temper of the alloy prohibits high temperature baking. This coating also works very well in salvage situations to build up worn or mis-machined components. In many cases, the cobalt phosphorus coating will hold up to corrosive materials where electroless nickel, sulfamate nickel, stainless steel, and most other materials fail.

TECHMETALS, INC.
Solving your problems with our solutions

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