



Dav-Tech ALUMINUM HARDCOAT

(Uniform Anodic Coating)

Natural / Black / Other Colors / Teflon Impregnated

Fact: *The Dav-Tech hardcoat process assures the “product dimensional stability” typically required in high-performance applications.*

Welcome to Dav-Tech Aluminum Hardcoating.

Hardcoating, also called Hard Anodizing, is very similar to sulfuric acid anodizing in that it is a coating of aluminum oxide that is produced on the surface of an aluminum component in the presence of a sulfuric acid electrolyte. Compared to sulfuric acid anodizing, a hardcoating bath is usually run at lower temperatures, higher amperages, and higher voltages to yield a much denser coating. The resultant coating is far superior to sulfuric acid or chromic acid coatings in terms of wear and corrosion resistance. These properties can be further enhanced through the selection and use of sealants. Dav-Tech hardcoating can be processed to meet the challenges of specific wear and corrosion applications.

Benefits of Dav-Tech Aluminum Hardcoat

When you are specifying the finish for your next design project, consider these important advantages of Dav-Tech Hardcoat:

- Abrasion resistance
- Corrosion resistance
- Erosion resistance
- Low coefficient of friction
- Flame resistance
- Dielectric properties
- Excellent heat emissivity
- Safe for food stuffs (cookware)
- Non-contaminating to blood supplies (medical instrumentation)
- Ceramic- like
- Light weight
- Applicable to most Aluminum Alloys

Planning for Dav-Tech Hardcoating.

Since the anodic hardcoat layer is produced by converting the surface aluminum into aluminum oxide, hardcoat is both a penetration into the metallic surface as well as a buildup. Typically the total thickness of the anodic coating is 50% penetration and 50% buildup. It is this penetration feature that renders the coating integral with the substrate, and differentiates it from other electrolytic coatings. It is the same feature that requires the planning of critical dimensions on parts that need to hardcoated. For example, a 1.000” diameter shaft hardcoated .002” will increase to 1.002” as a final diameter. That is a buildup of only .001” per side. (See Figure A). Similarly, a 1.000” bore will decrease to .998”.

The typical hardcoating thickness of .002” - .004” can be controlled to close tolerances, and can be finished by precise abrasive methods to meet extremely fine dimensional requirements.

Dav-tech Hardcoating meets or exceeds all requirements of MIL-C-8625, Type III and all other military and commercial specifications.

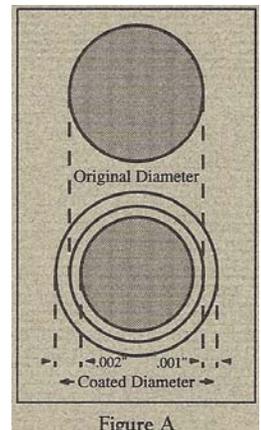


Figure A

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