

#1005 - Microfinish Improvement/Brite Ultraclean

Industry: Electronics/Communications - Manufacturers of cellular antenna equipment.

Mfg/Method: Machined

Alloy: 6063 Aluminum

Problem: The component is part of an antenna splitter for a fixed signal cellular antenna. It is used to communicate with several radios on one signal.

The part is black anodized as a final finish. The end customer complained that the black anodized finish was not of a uniform luster and appearance.



Solution: The normal fabrication of extruded and machined aluminum leaves the metal surface dull. That dull appearance plus imbedded contamination and lubricants left the base metal in pretty poor shape. Since anodizing is a very thin conversion coating process, the black film merely reflected the base metal. We electropolished several samples and they were sent to be black anodized. The electropolished then black anodized finish came out with a uniform black luster finish that met the end customer requirements. Electroplishing was approved as the pre-anodized finish.

Note to engineer: Not all alloys of aluminum electropolish well. Visit our alloys page at our web site for more details, or contact our technical representatives.