

AnoBlack EC

Proprietary Optical Blackening Process for Select Aluminum Alloys

For parts that are sulfuric acid anodized, **AnoBlack EC** provides electrolytic blackening using inorganic metallic salts as opposed to organic dyes. The result: a 100% smut-free coating that will not fade under extremes of either light or temperature.

AnoBlack EC coatings exceed the requirements of MIL-A-8625 Type II, Class 2 coatings. It has been approved by major aerospace OEMs for space vehicle applications where emissivity and high-temperature performance are critical.

DESIGN CONSIDERATIONS

- ❖ Anoplate's **AnoBlack EC** is proven for 1000, 5000 and 6000 series aluminum. It will not work with 2000 or 7000 series aluminum. Welded components should use identical welding rod material to ensure complete coverage.
- ❖ Like all anodize coatings, this coating penetrates into the surface and grows up from the original dimension. A dimensional change of 0.0002 – 0.0003" per surface is common for 6000 series alloys. Other alloys could see different dimensional growth than what is typical.

ADVANTAGES

- ❖ No outgassing when compare to conventional Type II anodize, or optical paints
- ❖ Able to withstand extremes of temperature without color degradation
- ❖ Unlike some optical paints, **AnoBlack EC** can be applied to exacting tolerances.
- ❖ Flat optical performance throughout visible to infrared ranges (VIS/IR) – no peaks at certain wavelengths.

TYPICAL APPLICATIONS

- ❖ Optical applications using either ultraviolet or infrared light in which the black color must not bleach or fade.
- ❖ Medical devices that are subject to heat and/or aggressive cleaning agents needed for sterilization.
- ❖ Semiconductor manufacturing and other applications which require zero particulate generation
- ❖ Any application where parts are subjected to intense light-such as space vehicle cooling units, external components, and light sinks

PHYSICAL PROPERTIES

- ❖ On 6000 series aluminum, will withstand 500°F for 1 hour without optical degradation
- ❖ Total normal emittance after 500°F bake is >0.90
- ❖ RoHS Compliant

