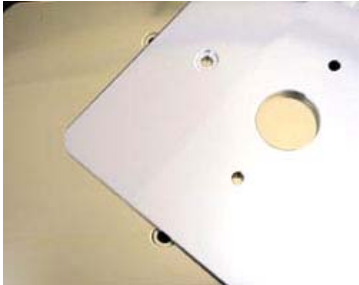


BRIGHT DIP... for Brighter Parts

Bright dip is an effective alternative to mechanical polishing and produces similar brightness at a fraction of the cost. To enhance the richness of your aluminum part, ask us about bright dip - for over 50 years, Pioneer Metal Finishing has been America's leader for bright dip and cosmetic anodizing.

The bright dip anodize process provides an aesthetically pleasing appearance to aluminum parts while increasing the corrosion and wear resistance of the raw aluminum. Bright dip yields a shiny, reflective finish on a variety of aluminum alloys and is preferred in many cosmetic applications for parts like bike frames, paintball markers, compound bows, multi tools, dental equipment plus many components for the automotive and cycle aftermarket industry that require bright trim work. Another advantage bright dip offers over mechanical polishing is its ability to polish very complex shapes, which is not always possible with mechanical polishing.

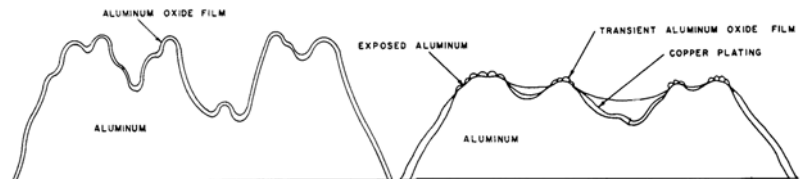


The bright dip process chemically polishes raw aluminum by leveling the microscopic roughness of the aluminum surface and increasing the specularity of the surface. After bright dip, the parts are anodized to provide a clear or colored protective oxide surface on the aluminum.



The bright dip process will not remove surface scratches, rolling marks, or die lines. These defects need to be mechanically removed with a manual buffing operation for a finish that is entirely free of defects.

Bright dip is widely used in applications like lighting fixtures (above) and paintball markers (right).



Pre-Bright Dip Surface Profile

Post-Bright Dip Profile showing the minimization of peaks, improving reflectivity.

For Best Results, Use Compatible Alloys

The brightness and smoothness of finished parts is dependant upon the metallurgy of the aluminum itself. The metallurgical factors affecting the level of brightness and absence of pitting are the amount and condition of impurities, types of alloying elements, and the crystalline grain structure of the aluminum.

The alloys most suitable for bright dip anodizing are: **5357, 5457, 5557, 6063, 6463, 7016 and 7029.**

- In general, a harder temper of an alloy produces the brightest work.
- 6000 & 5000 series are more successful than 2000 or 7000 series.

Due to its aggressive nature, bright dip is generally not recommended for close tolerance work or for parts that need masking. Consult your knowledgeable Pioneer Metal Finishing sales engineer if you have critical dimensions and are considering bright dip.



Call us toll free at 800-944-7634 to discuss your next metal finishing projects.

Pioneer Metal Finishing services the entire US with bright dip capacity in Minneapolis, MN (shown left) and in Portland, OR.