NAPTAGS
A DIVISION OF NAP INDUSTRIAL GROUP

Material Guide
Ultra Black Aluminum

Ultra Black Aluminum is an alloy of 3003 aluminum with an anodized black finish that provides enhanced durability, aesthetics, and functionality. It is often used in applications requiring high-performance and corrosion-resistant materials with a unique, sleek appearance. The process used to create Ultra Black Aluminum involves a combination of anodizing and dyeing or coating techniques to achieve a deep, rich black color that is not only visually appealing but also improves the material's overall performance.

CHARACTERISTICS of ULTRA BLACK ALUMINUM:

- **Anodized Surface:**
  ° The core feature of Ultra Black Aluminum is its anodized finish. Anodizing is an electrochemical process that thickens the aluminum oxide layer on the surface, making it more durable and resistant to corrosion. This anodized layer is porous and can be dyed, allowing for a rich, deep black color.
- **Durable and Scratch-Resistant:**
  ° The anodized surface significantly enhances the hardness and scratch resistance of the aluminum, making Ultra Black Aluminum highly durable in both industrial and consumer applications. The hard anodized layer increases its surface hardness, providing resistance to wear and tear.
- **Corrosion Resistance:**
  ° Ultra Black Aluminum, due to its anodized coating, is highly resistant to corrosion, even in harsh environments. The anodized layer forms a protective barrier that shields the aluminum from moisture, air, and many corrosive substances, preventing rust and degradation over time.
- **UV and Weather Resistance:**
  ° The black anodized coating offers excellent resistance to UV rays and outdoor weathering. This makes it ideal for outdoor applications where exposure to sunlight, rain, and fluctuating temperatures is common.
- **Aesthetic Appeal:**
  ° Ultra Black Aluminum has a sleek, sophisticated appearance with a matte or satin black finish, which is highly desirable for aesthetic purposes. The deep black color can complement modern design trends, making it ideal for applications where appearance is important.
- **Light Absorption and Reflectance:**
  ° The black anodized layer helps to absorb light, which can be beneficial in applications that require light control. This makes Ultra Black Aluminum suitable for applications where minimizing light reflection is critical.
- **Non-Toxic and Environmentally Friendly:**
  ° The anodizing process does not involve harmful chemicals or substances, making Ultra Black Aluminum a non-toxic and environmentally friendly option for many applications. Additionally, aluminum itself is 100% recyclable, contributing to sustainability.
- **Enhanced Thermal and Electrical Conductivity:**
  ° Aluminum, being a good conductor of heat and electricity, maintains these properties even after anodizing. Ultra Black Aluminum retains its thermal conductivity, which can be important in heat dissipation applications.

APPLICATIONS for ULTRA BLACK ALUMINUM:

- **Marine Applications:**
  - Boat Fittings
  - Marine Hardware
  - Signs for offshore equipment
  - Marine signage
  - Boat warning labels
  - Equipment Identification
- **Signage and Display:**
  - Outdoor signage
  - Nameplates
  - QR code signs
  - Informational signs
  - Suitable for retail, hospitality, healthcare, and education
- **Heat Sinks and Electronic Components:**
  - Labels for Heat sinks
  - Tags for electronic devices
  - Tags for computer components
- **Industrial and Military Equipment:**
  - Signs for industrial equipment
  - Signs for military applications
  - Tag for tools in harsh environments
- **Consumer Products:**
  - Signs for kitchen appliances, shelves
  - Signs for sporting equipment
  - Asset tags for electronics
- **Identification Tags:**
  - Long term serial number tags
  - Vehicle tags

Contact us today to Quote your Ultra Black Aluminum Project

Toll Free: 1-800-451-3330
Local: 616-647-0998
www.NapTags.com
info@napindgroup.com
7777 Childsdale Ave NE | Rockford, MI 49341

NAP INDUSTRIAL GROUP

NapTags.com
NapNameplates.com
NapADASigns.com
NapSupply.com

NAPTAGS
A DIVISION OF NAP INDUSTRIAL GROUP

Material Guide
Ultra Black Aluminum

BENEFITS of ULTRA BLACK ALUMINUM:

- **Improved Durability:**
  ° The anodizing process not only enhances the appearance but also provides significant improvements in mechanical strength, scratch resistance, and impact resistance. The hard anodized layer can significantly increase the longevity of aluminum products, reducing maintenance and replacement costs.
- **Corrosion and Weather Resistance:**
  ° Ultra Black Aluminum is highly resistant to corrosion, making it ideal for both indoor and outdoor applications. It can withstand exposure to moisture, acids, salts, and alkaline environments without rusting or degrading, making it a reliable choice for marine, industrial, and outdoor applications.
- **Aesthetic Versatility:**
  ° The sleek black finish offers a high-end, professional look that is aesthetically appealing across a variety of industries. Its matte black appearance gives products a modern, polished, and premium feel.
- **Low Maintenance:**
  ° Ultra Black Aluminum is easy to maintain because of its durable and smooth surface. Unlike painted finishes, which can chip or peel, the anodized black finish is permanent, meaning it won't fade or require frequent touch-ups. This makes it ideal for applications that require minimal upkeep.
- **Light and Heat Control:**
  ° The black anodized surface absorbs light and heat, which is beneficial in certain technical applications such as cameras, sensors, and scientific instruments, where light reflection and heat dissipation need to be carefully controlled.
- **Enhanced Wear Resistance:**
  ° The anodized surface is much harder than untreated aluminum, providing better resistance to scratches, abrasion, and other forms of physical damage. This makes Ultra Black Aluminum ideal for high-traffic or high-use environments.
- **Environmental Benefits:**
  ° Ultra Black Aluminum is environmentally friendly due to its recyclable nature and the non-toxic anodizing process. Unlike many other coatings that can contain harmful substances or require hazardous chemicals for application, anodizing is a cleaner, safer process.
- **Customizability:**
  ° Ultra Black Aluminum can be tailored to specific needs with custom shapes, sizes, and finishes. The anodizing process can also be used to create decorative patterns or textures on the surface, making it versatile for a variety of design preferences.
- **No Paint or Coatings:**
  ° Unlike painted or coated aluminum, the black color is integral to the anodized layer, which means it won't peel, chip, or fade over time. This makes Ultra Black Aluminum particularly suitable for applications where long-lasting color is crucial.

Contact us today to Quote your Ultra Black Aluminum Project

Toll Free: 1-800-451-3330
Local: 616-647-0998
www.NapTags.com
info@napindgroup.com
7777 Childsdale Ave NE | Rockford, MI 49341

NAP INDUSTRIAL GROUP

NapTags.com
NapNameplates.com
NapADASigns.com
NapSupply.com