



# MAGNAPLATE

COATINGS ENGINEERED FOR YOUR SUCCESS

## UPGRADE YOUR COATING

While these technical and performance characteristics are already far more plentiful than your average generic coating, applications requiring even more advanced performance should turn to the synergistic members of the Tuftram® family.

The addition of a polymer and dry lubricants for sealing provides a lower coefficient of friction and superior coating quality. Our synergistic Tuftram® coatings are uniform, and have better non-stick properties and chemical and corrosion resistance than our Tuftram® Basic hard anodizing.

# Tuftram® Basic

## Hard Anodizing

*Reliable coating for wear resistance on aluminum surfaces*

Part of our Tuftram® family of coatings, Tuftram® Basic hard anodizing is an electrochemical process that creates a protective oxide layer on aluminum parts, improving corrosion resistance and imparting other desirable surface properties such as lubricity. Since the entire process takes place in a cool electrolyte bath, Tuftram® Basic hard anodizing protects aluminum parts from any thermal distortion.

A wide range of wrought and cast aluminum alloys can be hard anodized. Process conditions as well as aluminum alloy determine the hard oxide layer's thickness, surface characteristics and degree of substrate incorporation. Our tight process control is a crucial ingredient in a quality hard anodized coating.

General Magnaplate is NADCAP-accredited, one of the highest accreditations in the industry for process control. In addition, we employ automated ramping for consistency in each batch. These high standards for process and end product make Tuftram® Basic the only hard anodizing worthy of the Magnaplate name.





### **IDEAL APPLICATIONS**

- Food processing
- Automotive
- Household appliances
- Pharmaceutical
- Aerospace
- Semiconductors
- Mining and defense

### **MATERIALS**

- Aluminum

### **TECHNICAL ADVANTAGES**

- Improved hardness.
- Low coefficient of friction after lubrication.
- Over 500 hours salt spray corrosion resistance can typically be achieved.
- Average coating thickness of 0.002 inches, depending on alloy.
- Corrosion, wear, heat and electrical resistance.
- High dielectric strength.
- Superior quality and process control (NADCAP).
- Compliance with industry standards such as:
  - REACH.
  - MIL-A-8625, AMS-2468, AMS-2469, AMS-2471 and AMS-2472.

### **PROPERTIES OF TUFAM® BASIC HARD ANODIZING**

- Hardnesses from 60 to 70 HRC in unsealed conditions.
- Color depends on thickness and alloy.
- Average coating thickness of 0.002 inches, depending on alloy.
- Non-conductive and can withstand up to 500 volts per 0.001 inches of thickness.
- Can be ground, lapped, honed or polished.
- Can be dyed.
- Can be sealed.
- Resistivity ranges from 106 up to 1013 Ohm-cm, depending on thickness.

*To learn more about TUFAM Basic and other problem-solving surface enhancement coatings, contact technical representatives at General Magnaplate Corporation.*