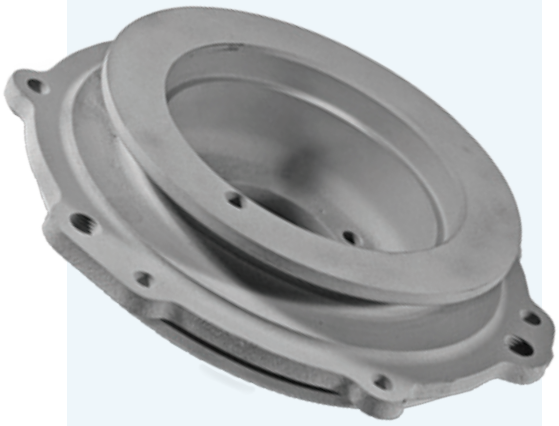
MAGNAPLATE
COATINGS ENGINEERED FOR YOUR SUCCESS

Magnadize®

Protecting magnesium alloys from wear, outgassing—and more

BENEFITS

- Wide temperature range: -100° to +550°F
- Thicknesses from 0.0002 to 0.002”
- Exceptionally low coefficient of friction
- High dielectric strength
- Oxidation resistance
- Abrasion and galling prevention
- Permanent lubricity
- Excellent release properties
- Complies with requirements of MIL-L-45202



MAGNADIZE® is a surface enhancement coating that uses supplementary polymers or dry film lubricants to protect magnesium alloys from wear and prevent outgassing. It surpasses other current methods of magnesium treatment, including magnesium anodizing and HAE anodizing—especially when it comes to preventing oxidation.

MAGNADIZE is ideal for demanding aerospace applications, which benefit from the high strength-to-weight ratio, dimensional stability and low density of magnesium alloys compared to stainless steel and aluminum. As a result of these properties, magnesium alloys can drastically reduce the weight of aircraft—reducing fuel consumption and CO_2 emissions. At the same time, lighter magnesium alloys are more susceptible to corrosion, galling and wear if left uncoated.

MAGNADIZE overcomes these challenges—protecting magnesium alloys from wear, outgassing and thermal extremes while minimizing friction. It also provides varying degrees of corrosion resistance and lubricity for both the application and alloy being used.

ENGINEERING DATA & PERFORMANCE CHARACTERISTICS

Wide operating temperature range. MAGNADIZE features a wide operating temperature range of -100° to +550°F (-73°C to 288°C)—ensuring surface protection in the harsh vacuum and low temperatures of outer space.

Low coefficients of friction. One way to reduce friction is to apply grease or oil to components. This method, however, requires routine maintenance and can release harmful particulates into the atmosphere. MAGNADIZE offers a permanent solution that boasts exceptionally low coefficients of friction.

TYPICAL APPLICATIONS

- Frames
- Housings
- Gearboxes
- Wheels
- Compressor components
- Gear splines
- Sliding vanes
- Air operated tools
- Castings
- Parts with weight or inertia constraints

Galling prevention. Metal galling, caused by adhesion between sliding metal surfaces, is a common industry challenge that causes parts to self-generate an oxide surface film. MAGNADIZE avoids this form of wear by creating hard, fracture-free surfaces that prevent hydrogen absorption from occurring between the metals.