

# Minimox®

## Alloy Treatment for Metals in Severe Service Conditions

Minimox® Self-Protective Alloy Treatment is a water-based surface modification solution designed to form superalloy properties on the surface of more basic materials. It was originally developed to reduce scaling of stainless steel at elevated temperatures.

Rather than putting rare earth elements in an alloy, they can be applied on the alloy surface and achieve many of the same benefits.

“Alloy Protection in a Bottle”

### Relevant Alloys

- Stainless steel
- Aluminum
- Nickel
- Titanium
- Superalloys
- Magnesium

### Applications

- Improved oxidation resistance
- Antifouling
- Warp reduction
- Carburization & metal dusting reduction

Some applications require specific post-coating thermal treatments.

### Industries

- Oil & gas
- Heat treating
- Automotive
- Aerospace
- Architectural
- Knives and cutting tools

### Durability & Deformation

Air dried Minimox cannot be easily removed via abrasion. Post treatment, samples can be bent and distorted without loss of properties.

### Product Specifications

- Suspended rare earth nanoparticles
- Single coat system
- No mixing necessary
- High temperature stable
- Viscosity and appearance of water
- pH: 7
- Suspended solids: 0.1-1%.
- Drying time: 1 hr
- Thickness of dried product: <5 nm
- Application: dip or spray
- Containers: 1, 5, and 15 gallons. 55 gallon drums upon request.
- Shelf life: 1 year unopened
- Storage: Room temperature, away from direct sunlight

### Surface Preparation

Surface finish can be either ground or polished metallic or mill oxide.

All metal surfaces should be solvent cleaned and air dried. Blasting is not recommended.

### Product Grades

Minimox® solution is available in three grades. Contact us to determine which is optimal for your application.

Technical  
Bulletin

Self  
Protective  
Alloy  
Treatment

*Contact our office for additional applications and instructions*

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