



# CHEM PROCESSING, INC.

*Platings & Coatings for Industry*

## Manganese Phosphate

Manganese phosphate coatings are applied to ferrous substrates to prevent galling and to improve break-in. Manganese phosphate coatings, unlike zinc phosphate coatings, also provide continued wear protection after initial break-in. The coating is formed via immersion in a dilute phosphoric acid solution and is dark grey in appearance, but almost all such coatings receive a subsequent application of oil which turns the surface deep black. In applications such as firearms, the coating resists scuffing and allows for oil application and reapplication. The standard measurement method for manganese phosphate coatings is by coating weight, and Chem Processing, Inc. applies weights from ranging from 5-32 g/m<sup>2</sup>, as determined by customer specification. By itself, the manganese phosphate coating offers some corrosion protection—the heavier the coating weight the higher the degree of protection—but this protection is significantly enhanced by the application of an oil, lacquer or wax.

### **Chem Processing Inc. Manganese Phosphate Capabilities:**

- Coating weights range of 5 to 32 g/m<sup>2</sup>
- Military certifications
- Available masking for selective coating application
- Salt Spray Corrosion Test per ASTM B-117
- Bulk or rack processing

### **Applicable Specifications:**

MIL-DTL-16232

TT-C-490

MIL-STD-171 5.3.1

VGS 6.2.3

### **Common Applications of Manganese Phosphate Coatings:**

- **Oil & Gas Industry:** couplings, fittings, oil rig components
- **Firearms & Ordinance:** we can certify to Parkerizing™ specifications) Due to its ability to hold oil and receive reapplication
- **Aerospace:** actuator components, fastening systems
- **Gears & Bearings:** break-in and lubricity
- **Marine Equipment:** break-in of engine components.

**Chem Processing Inc.** is committed to excellence in metal finishing. Chem Processing Inc. uses their engineering expertise and computerized process controls to **exceed their customer's expectations** when adherence to strict thickness specifications is essential.