



Synergistic Coating

What is Synergistic Coating?

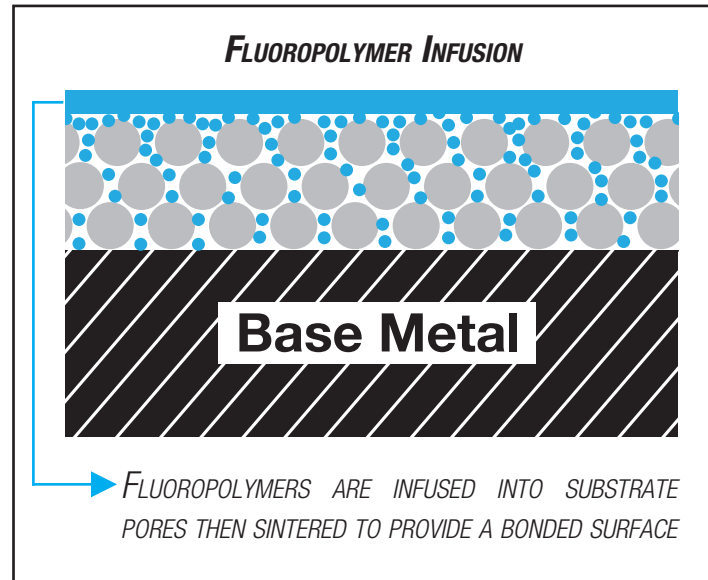
The MPI “Infused Matrix” synergistic coating is a proprietary, multi-step process that combines a proprietary nickel alloy with the controlled infusion of sub-micron sized particles of high temperature, low friction polymers.

The coating becomes an integral part of the surface base metal, as compared to a typical surface coating, and will not chip, crack, flake or peel. This surface treatment is engineered to provide an exceptional combination of low friction, permanent dry lubrication, corrosion protection, release (non-stick), non-wetting, wear resistance and hardness.

Coating Specifications:

- Nominal coating thickness: 0.001 (± 0.0002) inch x.per surface (lower and higher growths, tighter x.tolerances available upon request)
- Nominal coating hardness (Rockwell C): 65-68
- Corrosion resistance: >1,500H (ASTM B117 5% salt water @ 35° C)
- Abrasion resistance: excellent (0.03 g¹)
- Coefficient of thermal expansion: 14 μ m/m/°C
- Dry film lubrication: excellent
- Surface energy (Dyne/cm): 14-16
- Base material compatibility: ferrous and nonferrous metals
- Maximum operating temperature: 500° F
- Nominal coefficient of friction² (applied to a 12 rms)
- Static friction: 0.08 dynamic friction: 0.06
- Coating color: metallic finish
- Modulus of elasticity: 2.0 x 10⁵ N/mm²
- Chemical resistance (ASTM D543): excellent

**Specifications subject to change*



Benefits

- **Increases lubricity and abrasion resistance, and extends wear**
- **Excellent non-stick properties**
- **Low coefficient of friction**
- **Resists chemicals and corrosion**
- **Compliant with FDA and USDA standards**
- **Increases hardness**

¹ Weight loss in milligrams per 10,000 cycles using CS10 Wheel Taber Abrasion (ASTM D-4060-84/TM-5022-A, 1000g load, 10000 cycles, CS10 wheel)

² Values are system-dependent and will vary with normal load, distance and rate of motion, micro-finish, mated surface characteristics, temperature, and other factors.

MPI

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