

Process Datasheet

TECH 17

For corrosion resistance of hard chrome plating or thermal spray coatings in highly corrosive environments

TECH 17 is unique in its ability to fill and seal the inherent microcracking and porosity found in hard plating/coating that allow corrosives to attack the substrate and debond the plating/coating. It increases the bond strength and hardness of plating/coating.

TECH 17 thermochemically diffuses throughout the plating/coating, filling the porosity with corrosion resistant, super hard ceramic particles.

TECH 17 prevents corrosives from attacking the substrate, undermining and blistering the plating/coating.

TECH 17 improves abrasion resistance and corrosion resistance.

APPLICATIONS

TECH 17 is applied by saturating the plating/coating area with a chemical solution at room temperature. These chemicals are then converted into ceramic by a low temperature firing process. The firing also drives a reaction whereby the ceramic chemically bonds to both the plating/coating and the substrate. **TECH 17** can be applied to virtually any part which can be plating/coating, including internal diameters.

DENSITY

During application, the chemicals are drawn into all existing open pores and cracks in the plating/coating. The firing converts and bonds these chemicals to the walls of the voids and partially fills the pores and cracks. Repeated cycling assures that all these pores are filled or sealed off. The resulting plating/coating cannot be penetrated by corrosives as there are no open pores to allow infiltration

HARDNESS

The crystal hardness of the ceramic is an exceptionally hard 2850 Vickers. By diffusing this into and filling the porosity of plating/coating the measurable hardness is increased from an ordinary 850 Vickers to 1050 -1150 Vickers.

PROPERTIES

- Has thickness of less than 0.0002"
- Is chemically bonded into substrate
- Will not change dimensions
- Is low friction
- Offers sliding wear resistance
- Will increase hardness up to 29%
- Improves the release (non-stick) characteristic of other coating

TECHNICAL DATA

	Plating	Plating + Tech 17
Hardness	750-850 Vickers	1050-1150 Vickers
Porosity	Chemical	<1%, sealed
Bond Mechanism	Mechanical	Chemically- enhanced
Bond Strength	+4,000 PSI	Up to 10,000 PSI
Corrosion Resistance	12-24 hours (salt spray)	Over 1000 hours (salt spray)

*This process is not a substitute for quality plating/coating. Not even Tech 17 can cure problems of poor plating/coating.