LeKem, Inc.
1863 Lammers Pike - Batesville, IN - 47006
www.lekem.com
Where Innovation and Quality Meet

LEN-910 System

Electroless Nickel

LEN-910 deposits have a nickel-phosphorous alloy that is deposited by means of an autocatalytic reduction of metal from solution without the use of electricity. LEN-910 coatings are noted for the following properties: Coating is uniform consistent speed, semi-bright Electroless Nickel process with high phosphorous, non-magnetic content.

Advantages

- Stable uniformed rate.
- Non-magnetic coating.
- Controlled hardness, heat treatable.
- Excellent wear resistance, freedom from porosity.
- High tank stability.
- Compressively stressed deposit.
- Naturally lubricity, providing excellent release properties.
- Self-polishing effect in molding operations.
- A sound base coating for subsequent finishing operations.
- Easily waste treatable.

Deposit Properties:

Phosphorous Content	10-12 wt. %
Hardness	46-47 Rc as plated
Internal Stress	Compressive
Ductility	Pass (ASTM B-489)
Electrical Resistivity	70-100 microohm-cm
Melting Point	880 C
Neutral Salt spray	1000 hrs (ASTM-B17)
Density	7.75 g/cc

Operating Data:

LEN 910 A	Nickel complex solution
LEN 910 B	Make up solution
LEN 910 C	Hypophosphite replenisher with ammonia
LEN 910-HC	Hypophosphite replenisher without ammonia

Operating Instructions

1. A new bath should be made with 6% parts LEN-910 A and 15% parts LEN-910 B; the rest is DI water. Tanks should be previously calibrated to assure proper concentration. Tanks may now be half-filled with DI water. LEN-910 make up is added with air agitation on. Pure water is then added to bring the solution to the proper level.
2. pH should now be checked and adjusted to 4.6 with Aqua Ammonia if necessary. Always dilute ammonia 1:1 with DI water before adding. The same dilution applies to sulfuric acid if the pH ever needs to be brought below 5.0. The proper operating range is 4.4 to 4.7.
3. Air must be turned on before turning on heat.
4. Filter should be turned on and remain on throughout the operation period.
5. The bath is heated to 185-190 degrees F for normal operation, making sure the heater thermostat is in the bath. Do not exceed 195 degrees F.
6. Titration of the bath should be used on the amount of work being processed.
7. Operation range of nickel content should be maintained between 80-95%. Minimum processing inconsistencies will be experienced if bath is maintained between 85-90%.
8. Replenishment adds may be made during plating. LEN 910 A is always added before LEN 910 C in a 1 part A to two parts C ratio. Replenishment should be made in 10% increments to eliminate possible over-concentration of the bath.
9. Bath pH is self-maintained by proper replenishment. If, however, the pH varies from the operation range due to excessive drag-in, it may be adjusted by following instructions in step # 2. Dilutions of this type of add with DI water is a must at operation temperature.