

塑胶电镀系列 Plastic Plating Series



用于流动电话工业

For Mobile Phone Industry



用于汽车及其他工业

For Automotive & Other Industries

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- 超声波除腊(选择性) Ultrasonic Cleansing (Optional)
- **PROCLEANER™** BCR 万用除腊水 Multi-purposed Wax Remover

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- 亲水剂 Conditioner
- **POP™** PC-300 亲水剂 Conditioner

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- 膨胀剂(选择性用于ABS/PC或PC物料) Swelling(Optional for ABS/PC or PC materials)
- **POP™** PC-320 膨胀剂 Sweller

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- 化学粗化/湿润(选择性) Etching/Wetting(Optional)
- **POP™** PC-310/PC-311 粗化/湿润剂 Etcher/wetter

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- 六价铬还原 Neutralizing
- **POP™** PC-350 中和剂 Neutralizer

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- 敏化 Sensitization
- **POP™** PC-420 敏化剂 Sensitizer

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- 活化 Activating
- **POP™** PC-450/PC-480 活化剂 Activator

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- 加速 Accelerating
- **POP™** PC-370/PC-375 加速剂 Accelerator

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- 化学镀镍 Electroless Nickel Plating
- **PM 91** 化学镀镍工艺 Electroless Nickel Plating Process

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| A. 预镀镍 Nickel Strike (Optional)
SPECTRA™ T-400 半光亮镍电镀工艺
Semi-Bright Nickel Plating Process | B. 化学浸铜(选择性) Electroless Copper (Optional)
PPC 化学浸铜工艺
Electroless Copper Plating Process | C. 焦铜(选择性) Pyrophosphate Copper (Optional)
R.S.751 焦磷酸铜电镀工艺
Pyrophosphate Copper Plating Process |
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- 光亮酸铜电镀 Bright Acid Copper Plating
- **ÜBER-BRITE™** 光亮酸铜系列 Bright Acid Copper Plating Series

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- 半光亮镍电镀 Semi-Bright Nickel Plating
- **SPECTRA™** T-500/T-550 半光亮镍电镀 Semi-bright Nickel Plating Process

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- 高流镍电镀 High Sulfur Nickel Plating
- **SPECTRA™** K-600 高硫镍电镀工艺 High sulfur Nickel Plating Process

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- 光高镍电镀 Bright Nickel Plating
- **NALDO™** R318/R328/NIDELL™/NIKO™ 光高镍电镀工艺 Bright Nickel Plating Process

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- 镍封 Micro-Pours Nickel Sealing(MPS)
- **SPECTRA™** T-700/T-720 镍封电镀工艺 Nickel Sealer

完

END

- 三价铬或六价铬电镀 Trivalent or Hexavalent Chromium Plating
- **CHROMO-TRI™** 三价铬电镀工艺或 CR 六价铬电镀工艺 Trivalent or Hexavalent Chromium Plating Series

前处理系列 Pre-Treatment Series PROCLEANER™

PROCLEANER™ BCR 万用除腊水 Multi-purposed Wax Remover

PROCLEANER™ BCR 是一种能除去不同种类的油脂及适用于不同金属基体的万用除腊水：特殊配方，杂质容忍度高、寿命长、不侵蚀基体，能保持抛光面光泽。如浸洗或配合超声波一起使用，效果更佳。

- Remove wax rapidly
- Neutral pH solution, no harm to the substrates
- Keep the original brightness of the substrates
- Recommend to use with ultrasonic washing for better result

前处理系列 Pre-Treatment Series POP™

POP™ PC-300 亲水剂 Conditioner

POP PC-300 适用于塑料制品之亲水除污工序。此添加剂无烟无味，不需抽风；操作范围宽广，不易伤害基体；对水质硬度的容忍度高；可被生物降解，有利废水处理。

- Hydrophilic and remove impurities effectively
- No odor & smoke; ventilation is not required
- Mild; no harm to substrates; wide working range
- Decomposed by organic substances; simple for waste water treatment

POP™ PC-320/ PC-305 膨胀剂 Sweller

POP PC-320 膨胀剂是用于 ABS/PC 或 PC 塑料制品的镀前表面处理，便于粗化，为随后之镀层提供良好之结合能力。

- Improve the adhesion power of PC or PC+ ABS material
- Ideal for plastic plating such as automobile industry, computer and top grade sanitary ware.

POP™ PC-310 粗化剂 Etcher

POP PC-310 适用于塑料电镀中之铬酸、硫酸粗化液，能使 ABS 或 ABS 混合塑料的活化沉钌效果更佳。此添加剂可用于传统化学电镀，也可在低浓度钌离子条件下进行铜置换工艺，基于简化处理步骤极大地简化处理顺序。专门针对 ABS/PC 混合基体电解金属化，它能有效改良活化液中钌离子的吸附活性，大大提高生产力，从而降低生产成本。

- Conditioner used to alter the plastic surface to obtain true adhesion of plating on plastic
- Reduce the possibility of skip-plating

POP™ PC-311 粗化湿润剂 Wetter

POP PC-311 粗化湿润剂是用于降低微蚀槽液内之表面张力，能均匀微蚀塑料表面，并且促进溶液快速脱离工件。PC-311 粗化湿润剂可用于铬酸-硫酸微蚀槽上之塑料工件，并适用于挂镀和滚镀之应用。

- Reduces liquid surface tension in micro-etching process
- Micro-etches the plastic surface uniformly and helps separate solution and workpieces promptly
- Could be applied to chromic acid – sulfuric acid etching tank
- Suitable for both rack and barrel plating

POP™ PC-350 中和剂 Neutralizer

POP PC-350 用于塑料电镀粗化之后，可以中和粗化残留液，防止带入之后工序中，造成污染。

- Neutralized the reduction this cannot contaminate the post-treatment solution



前处理系列 Pre-Treatment Series POP™

POP™ PC-420 敏化剂

POP PC-420 是一种新的稀酸性预浸液，用在 PC-450 活化工艺之前，以它来代替穿孔镀工艺中常用的腐蚀性盐酸。该溶液的特点是采用液体开缸剂，固体添加剂，维护方便，酸含量低。

- A new diluted-acid predipping solution which is to replace the corrosive hydrochloric acid which is commonly used for perforated electroplating
- Easy for maintenance and with low content of acid

POP™ PC-450 / 480 活化剂 Activator

POP PC-450 / 480 是锡钯胶体复合活化剂，在经粗化后的塑料表面沉钯。本产品活性特高，粒子特细，比正常自配制钯水节省 20%，一般浓度可控制在每公升 20ppm 左右。效果良好，节省成本。

- A tin-palladium catalyst solution which catalyses the ABS plastic surface to influence the metal deposition from subsequent copper or nickel bath.

POP™ PC-370 / 375 加速剂 Accelerator

POP PC-370 / 375 用于塑料电镀中钯水沉积过程后。此溶液不含腐蚀性，使用安全；操控范围广阔，使用周期特长，并可节省钯水用量达三分之一。

- Specialized surfactant used after palladium depositing on plastic plating process
- Reduced more than 30% of palladium usage in the reductive process
- Durable, wide operation range
- Corrosive free



化学镀镍 Electroless Nickel Plating PM 91

PM 91 塑料电镀化学沉镍工艺 Electroless Nickel Plating Process

PM 91 能在已经活化好的塑料表面，沉积一层平滑、连续、附着力好的镀层，能耐蚀点烧结。此工艺稳定，操作温度低，成本低，适于挂镀和滚镀。PM 工艺之后，建议先闪镀铜或闪镀镍，再镀光亮酸铜。

- Smooth and continuous deposit on active plastic
- Great adhesion and excellent anti-sinter power
- Suitable for both rack plating and barrel plating

酸铜系列 Acid Copper Series ÜBER-BRITE™

ÜBER-BRITE™ 光亮酸铜系列 Acid Copper Plating Process

ÜBER-BRITE™ 的镀层光亮，不易产生针孔，填平度极佳（高达 75%），且内应力低及富延展性；镀液非常容易控制，电流密度范围宽阔，杂质容忍量高（不需经常用活性碳粉处理）。由于镀层电阻率低，故非常适合于对镀层物理性能要求高的电机工业，而各种不同类型的基体金属，铜件、锌合金件、塑料件等亦同样适用。

- Mirror bright copper deposit
- Excellent leveling power and ductility
- Easy to operate
- Ideal for both plastic and metal substrates

镀镍系列 Nickel Plating Series SPECTRA™

SPECTRA™ T-400 半光亮镍电镀工艺 (预镀镍) Semi-Bright Nickel Plating Process (Nickel Strike)

SPECTRA™ T-400 专门为防腐性能要求高的电镀工件而设计，是双层镍及多层镍系统必备的半光亮镍底层。此工艺不含香豆素，可降低废水和活性炭处理的成本；其镀层填平度极高，柔软性及电位差 (S.T.E.P.) 数值均可媲美一般香豆素系统的半光亮镍；镀液操控容易，可轻易将其它半光亮镍工艺转为 SPECTRA™ T-400，经济性较高。

- Highly Corrosion Resistance Semi-Bright Nickel deposit
- Easy to operate
- No coumarin, low cost for waste water and active carbon treatment
- Excellent leveling power, ductility and S.T.E.P. value
- Suitable for double or multilayer Nickel Plating

SPECTRA™ T-500 或 T-550 Semi-Bright Nickel Plating Process

SPECTRA™ T-500 或 T-550 专门为防腐性能要求高的电镀工件而设计，是双层镍及多层镍系统必备的半光亮镍底层。此工艺不含香豆素，可降低废水和活性炭处理的成本；其镀层填平度极高，柔软性及电位差 (S.T.E.P.) 数值均可媲美一般香豆素系统的半光亮镍；镀液操控容易。其整平度及光亮度较 T-400 为佳。

- Highly Corrosion Resistance Semi-Bright Nickel deposit
- Easy to operate
- No coumarin, low cost for waste water and active carbon treatment
- Excellent leveling power, ductility and S.T.E.P. value than T-400
- Suitable for double or multilayer Nickel Plating

SPECTRA™ K-600 高硫镍电镀工艺 High Sulfur Nickel Plating Process

SPECTRA™ K-600 特别适用于防腐性能要求高的多层镍电镀工艺；此工艺能把镀层的镍含量提高至 0.1 - 0.2%；如把 SPECTRA™ K-600 放于半光亮镍（低硫镍）及光亮镀镍之间，镀层的电位差会明显增加，大大提高镀层的防锈能力。

- Increase the content of Nickel up to 0.1 - 0.2%
- Provide high sulfur nickel deposit to the substrate to prevent the pit-type corrosion
- Design for double or multilayer Nickel Plating with High Corrosion Resistance Requirements

SPECTRA™ T-700 或 T-720 镍封电镀工艺 Nickel Sealer

SPECTRA™ T-700 / T-720 特别适用于防腐性能要求高的多层镍电镀工艺；此工艺含有一定量的不导电性微粒，均匀地分布在光亮镍镀层上，使其后套上的铬层形成微孔，从而提高防腐能力。

- Suitable for multilayer Nickel Plating with High Corrosion Resistance Requirements
- The non-electric powder spread evenly on the nickel deposit, which improve the corrosion resistance



化学沉铜 Electroless Copper Plating PPC or CU-PPC

PPC 塑料电镀化学铜工艺 Electroless Copper Plating for Plastic

PPC 一般用于化学镀镍之后，以保护底材不受其后之工序之酸性侵蚀，同时也防止漏镀情况出现。

- Protect substrates from any possible acid corrosion;
- Prevent skip plating.

CU-PPC 46/47 化学沉铜工艺 Electroless Copper Plating Process

CU-PPC 46/47 可代替化学沉镍工艺，特别适合无镍要求的装饰镀及 3C 部件和电磁屏蔽产品。

- Nickel-free
- Idea for the plating of 3C parts, EMI shielding products and certain decorations

焦磷酸铜 Pyrophosphate Copper R.S.751

R.S. 751 焦磷酸铜电镀工艺 Pyrophosphate Copper Plating Process

R.S. 751 的光泽度甚高，可使镀件获得如镜面般之光泽，亦同时使镀层具有高度的平滑与柔韧性；镀液消耗量低，适用范围广，使用方法简单，管理容易，电流效率高达 100%，可节省下一个电镀工程之时间及消耗。

- Mirror-bright deposit
- Smooth deposit with excellent adhesion and ductility
- Low consumption and high current efficiency
- Wide working range, easy to operate

镀镍系列 Nickel Plating Series NALDO™ / NIDELL™ / NIKO™

NALDO™ R 318/ R 328 或 NIDELL™ 或 NIKO™ 光亮镍电镀工艺 NALDO™ R 318/ R 328 / NIDELL™ / NIKO™ Bright Nickel Plating Process

NALDO™ R318/ R328 或 NIDELL™ 或 NIKO™ 光亮镍系列拥有宽广的电流密度范围，上铬容易，低电位的覆盖力甚强；电镀分解产物低，镀液使用寿命长；镀层快速光亮，洁白柔软、填平度高而均匀；适用于单层光亮镍或防腐性能要求的多层镍工艺。

- Mirror bright nickel deposit
- Excellent ductility, leveling and coverage power
- Durable solution: Minimal decomposition
- Suitable for single or multilayer nickel plating with high corrosion resistance requirements

白铜锡挂镀工艺 White Bronze Cu/Sn Rack Plating TINOL™

TINOL™ NF-67 无铅高速白铜锡挂镀工艺 Lead-free White Bronze Cu/Sn High Speed Rack Plating Process

TINOL NF-67 是一种新型无铅白铜锡工艺；白色光亮的镀层拥有极好的耐蚀和耐磨能力，可焊性高，摩擦系数低；不但适合做表层或用在镀钯或镀金前的底层，而且也可用在电子电镀上作为代镍工艺。

- Mirror bright white bronze deposits,
- High capability of abrasion and corrosion resistance
- Excellent Solderability, low torque tension
- Suitable for top or base coating in the pretreatment of palladium or aurum plating
- Ideal for the replacement of Nickel Plating in the Electronics plating process

三价铬电镀系列 Trivalent Chromium Plating Series CHROMO-TRI™

CHROMO-TRI™ 三价铬电镀系列 Trivalent Chromium Plating Process OR CR 六价铬电镀系列 Hexavalent Chromium Plating Process

CHROMO-TRI™ / CR 系列电流密度范围宽阔，覆盖及分散能力极佳，并可于较低的温度和电流密度下操作，节约能源。废水处理简单，沉积速度快，对硫酸根和氯离子的容忍性好；镀层色泽均匀及美观。

- Cost-efficient: Operate at low temperature and current density
- Excellent throwing power and dispersion power
- Low metal concentration, easy waste water treatment
- Excellent covering power
- High capability of current flow, minimize the current wastage
- High tolerance in metal impurities. Exchange-ion facility is not necessary for removing the impurities



Know How, Can Do.



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Version: 2010

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