



TECHNIC

A Global Leader in

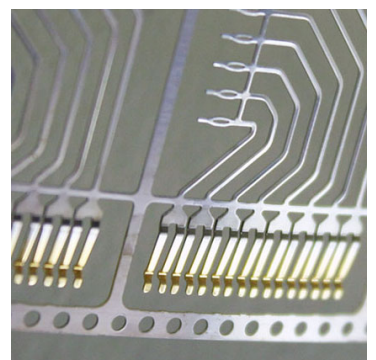
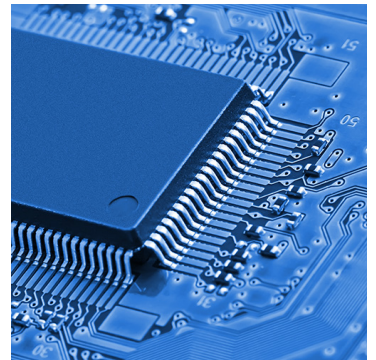
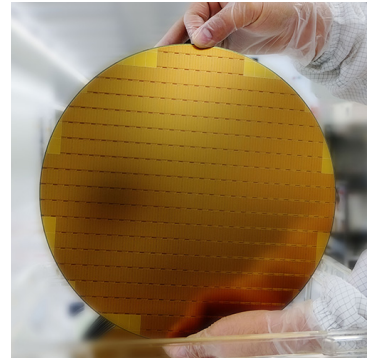
Specialty Chemicals

Surface Finishing Equipment

Analytical Control Tools

2019

Chemistry Product Guide





Since its inception in 1944, Technic Inc. has established a global reputation for technical excellence in the electrodeposition of precious metals. Following the expansion of our product lines through organic growth, strategic partnerships, and acquisitions, Technic has grown to be a global leader in specialty chemicals, surface finishing equipment, engineered powders, and analytical control systems. Our primary end-use markets include semiconductors (front end manufacturing, wafer level packaging, and lead frames), connectors, photovoltaic cells, electronic components, printed circuit boards, and industrial and decorative applications. Technic holds more than 100 patents in electroplating chemistry, equipment design, and related fields.

Technic's corporate headquarters and primary chemical and precious metal manufacturing and research labs, is located in Cranston, Rhode Island. The company's international expansion, starting in the 1950s, has brought Technic products and services around the globe. Technic is currently represented globally by subsidiaries in Canada, the United Kingdom, France, Germany, Italy, Hong Kong, China, Japan, Korea, Taiwan, Singapore, the Philippines, and Malaysia. North American customers enjoy support from regional offices and warehouse facilities in Rhode Island, California, Florida, Illinois, New York, Texas, Canada, and Mexico. Research and development is conducted at five separate locations worldwide.

Technic's chemical specialty product lines include the industry's broadest precious metal plating chemistry offering, including processes for gold, silver, rhodium, palladium, platinum, and ruthenium. Our patented lead-free tin and tin alloy processes have established a strong reputation for superior deposit morphology and assembly performance. Our expanding offering in the PWB fabrication market includes several final finish alternatives, a complete imaging product range, and a strong portfolio of wet chemistry processes. Our photovoltaic process offering continues to expand rapidly, particularly in the area of alternative metalization. In addition, technology alliances with leading global partners further strengthen our portfolio allowing us to provide customers with innovative solutions to future surface finishing challenges.

Our proprietary chemical products are supported by our Equipment Division, with three global manufacturing locations. The Technic Equipment Division, located in Pawtucket, Rhode Island, serves the electronics, anodizing, and industrial finishing industries with innovative technology, including our patented SBE (Spouted Bed Electrode) plating tool. Surface Finishing Technologies (SFT) located in Clearwater, Florida, specializes in continuous vertical processing equipment for both rigid and flexible materials. SFT specializes in unique electroplating solutions for high volume continuous processing of semiconductors, connectors and printed circuits, meeting the challenges of today's lean manufacturing. Technic Future Automation, located in Singapore, supports our growth platform in Asia for cost-effective, diversified electronic plating equipment. Technic's unique ability to provide both proprietary chemistries and specialized equipment offers customers a complete, engineered solution specifically for each application.

Technic also produces a wide variety of engineered precious and base metal powders, flakes and spheres. These powders are used globally for the manufacture of conductive inks, paints, adhesives, and pastes for the photovoltaic, general electronics, and semiconductor industries.

Technic also operates a subcontract plating service facility in Suzhou, China where electronic components are metalized as an outsource manufacturing service for some of the world's largest semiconductor component suppliers.

Technic delivers innovative, global, engineered solutions to strategic customers through our highly attentive local support teams. We pride ourselves on innovation, global reach, and strong local technical support.

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Electronic Component

Pre-Treatment

Techni Electro-Deflash #4	Electrolytic deflash	Low operating temperature. Highly alkaline (pH >12). Low cost.
Techni Electro-Deflash PL	Electrolytic deflash	Mildly alkaline solution designed to remove bleed and mold flash from plastic semiconductor packages electrolytically.
Techni Chemical Deflash LT	Immersion deflash	Chemical process recommended to remove bleed and light flash from plastic semiconductor packages at lower operating temperatures.
Techni ACT 9600	Mild descaler	Acidic, non-foaming, mildly aggressive chemistry. Effectively removes oxides and heat scale.

Electroplated Copper

Techni Copper ACP	Cyanide copper plating process	Minimized copper peel-off and molding compound delamination.
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Electrolytic Nickel

Goldeneye Nickel	Proprietary, electrolytic nickel plating process	Low stress, corrosion resistant deposit.
Techni Nickel S	Low stress, semi-bright, ductile nickel plating process	Can be used as a nickel underplate or final finish. Easy to operate and control. Full bright deposit. A general purpose bath which should be recommended for all non-critical applications. Uses nickel bromide for anode corrosion.
Nickel TS	High speed sulfamate plating process.	Recommended for use in applications requiring no discoloration of overlying tin deposits during thermal exposure.
High Speed Nickel Sulfamate FFP	High speed nickel sulfamate plating process.	High speed nickel plating process producing low stress, ductile nickel deposits.

Silver Electroplating

Techni Silver 1025	Full bright silver	General purpose silver plating process for rack, barrel and medium speed applications. Good for most electronic applications except where Se brightener is not desired/permitted; e.g., RF applications.
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Techni Silver EHS-3R	Semi-bright to bright silver plating process	Recommended for high speed/selective plating applications. Uses insoluble anodes.
Techni Silver HCD	High speed pure silver plating process for spot plating applications. Matte to bright deposits.	High purity deposit exhibiting high heat resistance with excellent die and wire bonding characteristics.

Passive Component Electroplating

Ceramistan DM	Tin/lead or pure tin plating process	Matte tin or tin/lead plating process for standard chip capacitor/chip resistor plating applications from a near neutral pH solution. Suitable for barrel plating or SBE equipment.
Ceramistan 1031	Satin or semibright tin plating process	Tin plating process designed for plating sensitive ceramic components in barrel and SBE applications
Ceramistan BR	Matte tin plating process	Tin plating process designed for plating sensitive ceramic components in barrel and SBE applications

Electroplated Tin and Tin/Lead

Techni NF JM 6000	Matte tin or tin/lead plating process. MSA based electrolyte	Medium grained, high speed, matte tin whisker resistant plating process based on MSA. Satisfies all requirements of JEDEC JESD 201. Can be formulated as a tin/lead process.
Technistan JM 7000	High speed whisker resistant matte tin plating process based on sulfuric acid.	Excellent solderability. Meets requirements of JEDEC JESD 201. Recommended for reflow applications. Best in class whisker resistance.
Techni NF JM 8000	High speed whisker resistant matte tin plating process based on methane sulfonic acid.	Excellent solderability. Meets requirements of JEDEC JESD 201. Suitable for reflow applications and extremely high current density applications.

Post Treatment

Technic PST Neutralizer	Neutralizer-rinse aid	Effectively neutralizes acid films from plating processes.
Tarniban C48	Post treatment process for tin and tin alloys	Post treatment process for tin and tin alloy deposits subjected to post plate thermal exposure in high humidity/steam environments.
Tarniban C50	Post treatment for tin and tin alloys	Provides protection of tin and tin alloy deposits from discoloration following exposure to high humidity/steam environments plus dry thermal exposure, i.e. reflow/oven bake.
Tarniban E-260	Post treatment process for tin and tin alloys	Post treatment process to protect tin and tin alloy deposits from oxidation and discoloration when subjected to thermal conditioning, i.e. reflow.



Techni Tin Lead Clear A Flock	Treatment for removal of stannic tin	Recommended for use in tin and tin alloy baths. Acts by coagulating and precipitating the stannic tin. Can be readily filtered, leaving behind a clear plating bath.
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Stripping

Techni Silver Stripper 3500	Anodic, high speed silver back-strip solution	Alkaline, non-cyanide stripper for use on copper and copper alloys.
Techni M-16 Tin-Lead Stripper	Immersion belt stripper. Nitric acid based	Low sludge, low cost stripper. High strip rate (0.33-0.83 um/second). High solder capacity.

Ancillary Equipment

Ancillary Plating Equipment	Upgrades, spare or replacement parts for all plating operations	DC rectifiers, PPR rectifiers, amp hour meters, heaters, filters, ultrasonics, spare parts, retrofits and upgrades.
Anodes and Anode Baskets	All Plating Processes	Platinum clad columbium, Platinized Titanium, Stainless Steel, Iridium Oxide, Cu, Sn, Sn/Pb, Ni.
Gold Saver - Resin Recovery System	Recovery of gold and silver	Gold reclaim system for in tank filter type.

Equipment

Reel to Reel	Continuous processing electroplating equipment	Custom designed continuous, reel-to-reel plating systems deliver precisely deposited gold, silver, copper, nickel, tin, tin/lead, palladium and palladium nickel over any ferrous or non ferrous metal.
SBE Plater - Barrel Alternative	Spouted Bed Electrode (SBE) plater	Technic's patented method of electroplating small components such as electronic connectors, discs, pins and SMT chip capacitors and chip resistors.
CDPP-2000	Controlled Depth Pin Processing	Continuous, fully enclosed, controlled depth processor for pin plating. Fully automatic cartridge loading and unloading with fast and easy part changeovers.
Tumbleplater - Barrel Alternative	Open barrel, parts only transport processor	Fully automatic batch processing line transferring only the parts from station to station. Benefits include: reduced waste due to dragout by 75% plus savings of 30-40% on chemistry costs.
Hoist Systems: Side Arm, Overhead, and Rim Runner	Automatic and semi-automatic plating lines	Custom and turnkey design, vertical plating lines with complete automatic or semi-automatic operation.
SP-2001 Cut Strip Leadframe Plating System	Automatic leadframe plating system	Continuous operation of the system insures uniform deposit, eliminating the need for solder dipping. Manual loaded semi-automatic capable of 600 strips/hour to fully automatic with load and unload capable of 1200 to 2400 strips/hour.



Manual Plating Lines	Vertical automatic and manual equipment for all plating process steps	Rectifiers, heaters, filters and other related equipment, provided off the shelf in most cases. Complete manual plating line are custom designed and built in house.
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Leadframe

Pre-Treatment

Techni ACT 9600	Mild descaler	Acidic, non-foaming, mildly aggressive chemistry. Effectively removes oxides and heat scale.
Technic Predip 470	Anti-immersion predip chemistry prior to silver plating	Recommended for copper and copper alloy lead frame materials.
Technic TEC 1016	Electrolytic cleaner	Alkaline low foaming, chelated. Rapidly removes oils, grease and other contaminants.

Copper Electroplating

Techni Copper ACP	Alkaline Cyanide Copper Strike	Exhibits improved copper and molding compound adhesion.
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Nickel Electroplating

High Speed Nickel Sulfamate FFP	High speed nickel sulfamate plating process	High speed Nickel plating process producing low stress, ductile nickel deposits.
Goldeneye Nickel	Proprietary, electrolytic nickel plating process	Low stress corrosion resistant deposit.

Palladium & Palladium Alloy Plating

Technic Pallaspeed VHS	High speed pure Palladium plating process based on Palladium ammonium chloride	Bright deposit. Deposits exhibit good ductility and moderate stress.
Technic Palladium Nickel VHS	Pd/Ni alloy, semi-bright to bright , 70-90% Palladium	Conventional Pd/Ni plating process, chloride based electrolyte. Capable of depositing Pd/Ni alloys containing 70-90% Palladium.
Pallaspeed Palladium Nickel NFA	A chloride free, low ammonia Palladium Nickel alloy plating process (70-90% Palladium)	Recommended for rack, barrel and high speed applications. A low stress deposit with excellent wear resistance and good ductility.
Pallaspeed 990	A chloride free, low ammonia pure palladium plating process.	A semi-bright to full bright deposit which exhibits superior corrosion resistance with low porosity and stress.



Gold Electroplating

Techni Orostrike C	High speed acid gold plating process	High speed gold strike. Meets ASTM B488 Type III Grade A requirements.
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Silver Electroplating

Techni Silver EHS-3R	Semi-bright to bright silver plating process	Recommended for high speed/selective plating applications. Uses insoluble anodes.
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Techni Silver HCD	High speed pure silver plating process for spot plating applications. Matte to bright deposits.	High purity deposit exhibiting high heat resistance with excellent die and wire bonding characteristics.
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Post Treatment

Techni Silver Stripper 3500	Electrolytic silver strip	Alkaline non-cyanide stripper recommended for back stripping silver from copper and copper alloys.
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Tarniban KS II	Post Treatment for silver and gold	Designed to protect silver and gold surfaces from tarnish/oxidation. It is highly recommended for those applications where silver deposits must pass the most stringent sulfide compound corrosion tests. (See Fed Spec QQ-S-365D). It also minimizes nitric acid fume attack on thin gold deposits. Competitive product: Enthone Evabrite WS.
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Tarniban E	Post treatment for Palladium	Minimization of epoxy bleedout.
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Ancillary Equipment

Ancillary Plating Equipment	Upgrades, spare or replacement parts for all plating operations	DC rectifiers, PPR rectifiers, amp hour meters, heaters, filters, ultrasonics, spare parts, retrofits and upgrades.
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Anodes and Anode Baskets	All Plating Processes	Platinum clad columbium, Platinized Titanium, Stainless Steel, Iridium Oxide, Cu, Sn, Sn/Pb, Ni.
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Gold Saver - Resin Recovery System	Recovery of gold and silver	Gold reclaim system for in tank filter type.
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Equipment

SP-2001 Cut Strip Leadframe Plating System	Automatic leadframe plating system	Continuous operation of the system insures uniform deposit, eliminating the need for solder dipping. Manual loaded semi-automatic capable of 600 strips/hour to fully automatic with load and unload capable of 1200 to 2400 strips/hour.
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Reel to Reel	Continuous processing electroplating equipment	Custom designed continuous, reel-to-reel plating systems deliver precisely deposited gold, silver, copper, nickel, tin, tin/lead, palladium and palladium nickel over any ferrous or non ferrous metal.
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CDPP-2000

Controlled Depth Pin Processing

Continuous, fully enclosed, controlled depth processor for pin plating. Fully automatic cartridge loading and unloading with fast and easy part changeovers.

Connector

Pre-Treatment

Techni Acid Salt TAS-1	Powder acid activator	Acid salt, non-fluoride, replacement for mineral acids in pickling operations. Used to activate all base metals.
Techni Acid Salt TAS-3Z	Powder acid activator	Acid salt with fluoride for nickel alloys, copper and brass activation. Similar to TAS-1, but more aggressive for hard to activate surfaces.
Techni ACT 9600	Mild descaler	Acidic, non-foaming, mildly aggressive chemistry. Effectively removes oxides and heat scale.
Techni Polish 3212	Electropolish	High speed electropolish for use on copper, steel, and stainless steel alloys.

Electrolytic Nickel and Nickel Alloy Electroplating

High Speed Nickel Sulfamate FFP	High speed nickel sulfamate plating process	High speed Nickel plating process producing low stress, ductile nickel deposits.
Goldeneye Nickel Tungsten	Goldeneye Nickel Tungsten alloy plating process	Goldeneye Nickel Tungsten is a unique process specifically designed to deposit a 65/35 Ni/W alloy in connector and electronic component applications where it can be applied as a barrier layer replacement for nickel. Alloy in connector and electronic component applications where it can be applied as a barrier layer replacement for nickel.
Techni Nickel TS	High speed nickel sulfamate plating solution	Specifically designed to prevent discoloration of parts which are subjected to high temperature bake after tin plating.
Techni Nickel S	Low stress, semi-bright, ductile nickel plating process	Can be used as a nickel underplate or final finish. Easy to operate and control. Full bright deposit. A general purpose bath which should be recommended for all non-critical applications. Uses nickel bromide for anode corrosion.
Goldeneye Nickel	Proprietary, electrolytic nickel plating process	Low stress, corrosion resistant deposit.

Electroless Nickel

Techni EN 1400	Low phos (1-4% P) electroless nickel plating process	Semi bright EN deposit, deposition rate 300-400 u/hr (7-10 u/hr).
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Techni EN 2600	Mid phos (7-8% P) electroless nickel plating process	Full bright EN deposit, deposition rate 500-1000 u-in/hr (12-25 um/hr).
Techni EN 2600 SB	Mid phos (7-8% P) electroless nickel plating process	Semi bright EN deposit, deposition rate 500-1000 u-in/hr (12-25 um/hr).
Techni EN 3500	High phos (10-12% P) electroless nickel plating process	Semi bright EN deposit, deposition rate 400-600 u-in/hr (10-15 um/hr). Highest level of corrosion resistance.
Techni EN 8200	Mid phos (7-8% P) electroless nickel plating process	Undercoat for Techni 8085 to produce a black finish.

Copper Electroplating

Techni Copper C	Semi-bright cyanide copper strike	Semi bright strike process. Recommended for difficult to plate metals.
Techni MSI CuCN Bright Copper Cyanide	Alkaline Cyanide Copper Strike	Full bright process used for both strike and full build applications.
Cu Satin	Acid Copper	Deposits a fine grained, high purity satin finish with low organic content.

Palladium & Palladium Alloy Electroplating

Technic Palladium Nickel VHS	Pd/Ni alloy, semi-bright to bright , 70-90% Palladium	Conventional Pd/Ni plating process, chloride based electrolyte. Capable of depositing Pd/Ni alloys containing 70-90% Palladium.
Technic Pallaspeed VHS	High speed pure Palladium plating process based on Palladium ammonium chloride.	Bright deposit. Deposits exhibit good ductility and moderate stress.
Pallaspeed Palladium Nickel NFA	A chloride free, low ammonia Palladium Nickel alloy plating process (70-90% Palladium)	Recommended for rack, barrel and high speed applications. A low stress deposit with excellent wear resistance and good ductility.
Pallaspeed 990	A chloride free, low ammonia pure palladium plating process.	A semi-bright to full bright deposit which exhibits superior corrosion resistance with low porosity and stress.

Silver Electroplating

Techni Silver 1006	Full bright silver	Antimony-hardened silver plating process for electronics applications.
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Techni Silver 1025	Full bright silver	General purpose silver plating process for rack, barrel and medium speed applications. Good for most electronic applications except where Se brightener is not desired/permitted; e.g., RF applications.
Techni Silver 1050	High speed, ductile, matte to semi-bright silver plating process for reel to reel applications.	Matte to semi-bright 99.9% ductile silver deposit. Recommended for use with soluble anodes.
Techni Silver Strike HCD	Silver strike	Low free cyanide silver strike.
Techni Silver HCD	High speed pure silver plating process for spot plating applications. Matte to bright deposits.	High purity deposit exhibiting high heat resistance with excellent die and wire bonding characteristics.
Durasil Silver	Two-part silver alloy plating process combining Durasil® Silver with Tarniban®CBG	Silver alloy deposit provides excellent contact and wear resistance. Good tarnish resistance in severe corrosive environments (MFG).

Gold Electroplating

Techni Gold 300	Nickel hardened gold plating process	General purpose, nickel hardened gold plating process for connector applications.
Techni Gold 400	Cobalt hardened gold plating process	General purpose, cobalt hardened gold plating process for connector applications.
Techni-Gold 434 HS	Pure gold plating process	General purpose pure gold plating process for high speed applications. Excellent solderability, die attach and wire bond properties. Meets Type III Grade A requirements of ASTM B488.
Techni Gold Additive AIA	Minimizes or prevents gold immersion on nickel substrates	Recommended for high speed and selective applications. Can be used with any Technic gold plating process.
Technic Orostrike C	High speed acid gold plating process	High speed gold strike. Meets ASTM B488 Type III Grade A requirements.
Techni Gold LCD Polarizer	Specially formulated additive for Techni Gold plating solutions	Inhibits deposition of gold in low current density areas. Can be used with any Technic gold plating process.

Ruthenium Electroplating

Ruthenium U	Ruthenium plating process	Produces a grey ruthenium deposit over precious metal undercoats (e.g. Pd/Ni) for connector applications.
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Dark Ruthenium	Ruthenium plating process	Produces a dark ruthenium deposit over precious metal undercoats (e.g. Pd/Ni) for connector applications.
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Rhodium & Rhodium Alloy Electroplating

Techni White Rhodium	Electrolytic Rhodium Plating Process	The Techni White Rhodium series of rhodium-based finishes is recommended to provide the ultimate in corrosion protection, particularly for satisfying end user imposed electrolytic sweat test requirements.
Techni White Rhodium-Ruthenium	Electrolytic Rhodium-Ruthenium Plating Process	The Techni White Rhodium series of rhodium-based finishes is recommended to provide the ultimate in corrosion protection, particularly for satisfying end user imposed electrolytic sweat test requirements.
Techni White Rhodium-Palladium	Electrolytic Rhodium-Palladium Plating Process	The Techni White Rhodium series of rhodium-based finishes is recommended to provide the ultimate in corrosion protection, particularly for satisfying end user imposed electrolytic sweat test requirements. Techni White Rhodium-Palladium provides the optimum combination of ease of operation and results for the most demanding applications.

Tin & Tin Alloy Electroplating

Technibrite HT 1000	Sulfate based bright tin plating process	General purpose, full bright process for rack and barrel plating applications.
Techni Matte Tin Sulfate 89TI	Sulfate based matte tin plating process	General purpose, low cost matte tin plating process for barrel plating applications.
Techni NF BT2	MSA-based bright tin and tin/lead plating process	Operates over a wide CD range for increased output and flexibility in production. Produces brilliant deposits with good ductility. Exhibits good throwing power and distribution characteristics.
Techni NF JB 3000 NS	Bright high speed whisker resistant tin plating process based on MSA.	Recommended for deposits subjected to post plate steam aging. Wide bright range. Runs at slightly elevated temperature. Fully analyzable components. Satisfies all requirements of JEDEC JESD201.
Techni NF JB 3400	High speed bright tin/lead plating process	Mirror bright 90/10 or 60/40 tin/lead alloy deposits from MSA electrolyte.
Techni NF JM 6000 LS	MSA based process for matte tin and tin/lead plating	General purpose rack and barrel matte tin and tin/lead plating process. Operates over a wide current density range with uniform deposit appearance.
Technistan JB 3000	High speed bright tin plating process. Sulfate based electrolyte.	Bright, whisker resistant pure tin, mixed acid/sulfate based. Satisfies all requirements of JEDEC JESD 201.
Technistan JM 6000	Matte tin plating process. Sulfate based electrolyte.	Medium grained, high speed, matte tin whisker resistant mixed acid/sulfate based plating process. Satisfies all requirements of JEDEC JESD 201.



Technistan JM 6000 LS	Sulfate based matte tin	Matte whisker resistant deposit. Recommended for rack/barrel applications (up to 4 ASD).
Technistan JM 7000	High speed whisker resistant matte tin plating process based on sulfuric acid.	Excellent solderability. Meets requirements of JEDEC JESD 201. Recommended for reflow applications. Best in class whisker resistance.
TechniBrite TL-12	MSA based tin lead plating process	Low current density plating process which produces mirror bright 90/10 to 60/40 alloy deposits in rack and barrel applications.
Techni NF JB 3500	MSA based tin lead plating process	High current density plating process which produces mirror bright 90/10 or 70/30 tin lead alloy deposits.
Techni NF JM 8000	High speed whisker resistant matte tin plating process based on methane sulfonic acid.	Excellent solderability. Meets requirements of JEDEC JESD 201. Recommended for reflow applications. Suitable for extremely high current density applications.

Post Treatment

Tarniban 60	Post treatment for silver	An inorganic coating designed to improve the tarnish resistance and solderability of silver deposits, particularly after dry heat thermal exposure. Recommended for rack, barrel, and high speed reel-to-reel applications.
Techni Aqua Shed-1	Rinse aid	Creates hydrophobic surface to increase rinseability and reduce water staining.
Tarniban KS II	Post treatment for silver, gold	Designed to protect silver and gold surfaces from tarnish/oxidation. Highly recommended for applications where silver deposits must pass stringent sulfide compound corrosion tests. It also minimizes nitric acid fume attack on thin gold deposits.
Technic PST Neutralizer	Neutralizer-rinse aid	Effectively neutralizes acid films from plating processes.
Techniseal	Cathodic electrolytic passivation process	Provides improved corrosion protection and appearance degradation of silver deposits.
Tarniban C48	Post treatment process for tin and tin alloys	Specifically designed for use on tin and tin alloy deposits which are subjected to post-plate thermal exposure in high humidity/steam environments. For optimal results, Tarniban C48 should be used in combination with Technic PST.
Tarniban C50	Post treatment process for tin and tin alloys	Provides protection of tin and tin alloy deposits from discoloration following exposure to high humidity/steam environments plus dry thermal exposure (reflow/oven bake).
Tarniban E-260	Post treatment process for tin and tin alloys	Protects tin deposits from oxidation and discoloration following post-plate high temperature dry thermal exposure. Optimum results when used in combination with Techni Nickel TS. Recommended for rack, barrel and high speed applications.



Technistan Ag Post Dip	Post treatment for tin/silver deposits.	Designed to remove immersion silver from tin/silver deposits and preserve the deposit appearance from heat exposure.
Tarniban CBG	Post treatment for silver and gold	Non-aqueous process for improved corrosion and wear resistance. Recommended for use in combination with Durasil® Silver.
Technic 8085	Blackening process	For use in combination with Techni EN 8200 to produce a dark black finish.

Ancillary Equipment

Ancillary Plating Equipment	Upgrades, spare or replacement parts for all plating operations	DC rectifiers, PPR rectifiers, amp hour meters, heaters, filters, ultrasonics, spare parts, retrofits and upgrades.
Anodes and Anode Baskets	All Plating Processes	Platinum clad columbium, Platinized Titanium, Stainless Steel, Iridium Oxide, Cu, Sn, Sn/Pb, Ni.
Gold Saver - Resin Recovery System	Recovery of gold and silver	Gold reclaim system for in tank filter type.

Equipment

CDPP-2000	Controlled Depth Pin Processing	Continuous, fully enclosed, controlled depth processor for pin plating. Fully automatic cartridge loading and unloading with fast and easy part changeovers.
SBE Plater - Barrel Alternative	Spouted Bed Electrode (SBE) plater	Technic's patented method of electroplating small components such as electronic connectors, discs, pins and SMT chip capacitors and chip resistors.
Reel to Reel	Continuous processing electroplating equipment	Custom designed continuous, reel-to-reel plating systems deliver precisely deposited gold, silver, copper, nickel, tin, tin/lead, palladium and palladium nickel over any ferrous or non ferrous metal.
Tumbleplater - Barrel Alternative	Open barrel, parts only transport processor	Fully automatic batch processing line transferring only the parts from station to station. Benefits include: reduced waste due to dragout by 75% plus savings of 30-40% on chemistry costs.
SP-2001 Cut Strip Leadframe Plating System	Automatic leadframe plating system	Continuous operation of the system insures uniform deposit, eliminating the need for solder dipping. Manual loaded semi-automatic capable of 600 strips/hour to fully automatic with load and unload capable of 1200 to 2400 strips/hour.
Hoist Systems: Side Arm, Overhead, and Rim Runner	Automatic and semi-automatic plating lines	Custom and turnkey design, vertical plating lines with complete automatic or semi-automatic operation.



Manual Plating Lines

Vertical automatic and manual equipment for all plating process steps

Rectifiers, heaters, filters and other related equipment, provided off the shelf in most cases. Complete manual plating line are custom designed and built in house.

PCB Process

Cleaner

Techni X-Cell 318	Pattern Plate Pre-clean	Low Cost, Easy to Use, Excellent Cleaning Capability for Heavily Soils and Oxidation.
TechniClean TH 1020	Acid cleaner for ENIG process	Cleaner designed to stop electroless nickel from depositing in non plated through holes.
TechniClean AT 1000	Final Finish and Pattern Plate Pre-clean	Low Cost, Easy to Use, Free Rinsing, Will Not Etch / Ideal for Thin Copper Coatings.

Copper Micro Etch

TechniEtch AT2000	ENIG Pre-clean	Low Cost, High Copper Capacity Compared to Generic Sodium Persulfate.
Techni CU 85	Pattern Plate Pre-clean	Long Life, High Copper Capacity.
TechniEtch 1118	Surface preparation prior to resist	Improved topography and longer bath life versus generic Sodium Persulfate.
TechniEtch 1688	Surface preparation prior to solder mask application	Horizontal process to improved adhesion of solder mask.

Electrolytic Copper

Technic CU128	Acid Copper for thin substrates	High speed high throw process for thin substrates. Ideal for VCP applications.
Technic CU135	DC acid copper for use with insoluble anodes	Easy to use, designed for applications requiring high throw. One component concentrated Replenishment to be used with Technic ISA insoluble anode system.
Technic CU 5300	PPR Copper For Medium to High Technology	Easy to use, stable PPR process yielding a bright deposit.



Technic CU 2800	Medium to high technology DC Copper	Easy to use, low cost two component, analyzable high performance / low CD operation.
Technic CU 2900	DC Copper Medium to High Technology	Easy to use, designed for applications requiring high throw. One component concentrated Replenishment.
Technic CU 2300	DC Copper For Medium to High Technology	Easy to use, low cost two component, analyzable.

Electrolytic Tin

Technic NF 820 HS	Matte Tin Etch Resist	Low operating cost. Good product for all technology types. Optimum distribution in the range of 15 - 20 ASF. Excellent throwing power.
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Electrolytic Nickel

Techni Nickel HT-2	Sulfate Nickel For High Aspect Ratio Deep tank Operation	For high aspect ratio applications over 10:1 aspect ratio and holes sizes below 18 mils. Will dramatically improve throwing power compared to sulfate or sulfamate chemistries.
Techni Nickel S	Sulfamate Nickel	Conventional sulfamate nickel. Good for military applications and for aspect ratios below 10:1. Will reduce slivering in full panel nickel gold product compared to a standard bright nickel sulfate deposit.
Technic FFP Nickel	Sulfate Nickel For High Speed Applications	Sulfate nickel for high speed plating. Specifically designed for use in TAB plating.

Electroless Nickel

TechniENickel AT5600	Pb and Cd free electroless nickel	Mid Phos electroless nickel for optimum solderability.
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Electrolytic Gold

Orosene 80 RC	Hard Gold For Deep Tank Application	Industry standard in hard gold products. Excellent distribution with consistent high yields. Compatible with aqueous resists. High efficiency reduces plating time.
Orosene 990 HS	Hard Gold For high Speed Applications	Very high efficiency, high speed bright plating solution. The solution can be operated at low gold concentrations and at temperatures to 150o F, providing high plating rates with excellent deposit distribution.
434 HS	Soft Gold For Deep Tank Applications	434 Acid Pure Gold process is designed to produce a gold electrodeposit of 99.9+% purity for devices used in the semi-conductor, electronic, and PWB industries where high purity gold deposits are required to meet wire bonding requirements.



Solder Mask

TechniMask ISR 1000	Liquid Photoimageable Solder Mask	For Rigid and Rigid-Flexible circuit applications. Complies with NASA Outgassing spec. Halogen Free, RoHS and Reach compliant. Superior resistance to ENIG.
TechniMask UV SR2	UV Curable Solder Mask	Excellent flexibility and cosmetic appearance. 100% solids system with no VOC content. Excellent encapsulation without skips and minimal air entrapment.
TechniFlex DRF 2000F	Dry Film Photoimageable Solder Mask/Coverlay Film	Direct imaging and high resolution capability below 3 mils for ultrafine pitch dams. Compatible with high flexibility and heat resistance resin systems.
TechniFlex LCL 1000F	Liquid Flexible Photoimageable Solder Mask	High heat resistance to multiple soldering operations, capable of lead free soldering/hot bar processing. Extremely high flexibility before and after primary baking. Direct imaging capability.

Final Finishes

TechniPad AU6100	Immersion Gold for ENIG	High performance cyanide based immersion gold that reduces gold usage and improves solderability.
Techni IM Gold AT8000	Non cyanide immersion gold	Self limiting immersion gold with superior solderability.
Argentomerse NC	Non cyanide, immersion silver	Nitrate free immersion silver formula for dip applications.
TechniPad SMT	Electroless Nickel Immersion Gold Process	ENIG process designed for Pb-free reflow temperatures. Excellent solder joint strength. Equiaxial nickel grain structure.
LevelTech	Immersion Tin	Immersion tin providing a co-deposited structure that eliminates whiskers and increases resistance to dendritic growth. Excellent surface cleanliness. Low cost, fully conveyorizable process.
TechniPad 7611	Electroless palladium for ENEPIG	Autocatalytic Pd producing a pure Pd deposit
TechniPad ENEPIG	Electroless Nickel, Electroless Palladium, Immersion Gold	TechniPad ENEPIG provides a very stable true electroless palladium for gold wire bonding capability and better wear resistance for multiple contacts.

Metal Strippers

Technistrip AU	Gold Stripper	Cyanide based gold stripper prepared from dry mix. Removes gold from most base metals.
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Techni EN Strip 1700	Electroless Nickel Stripper	Non cyanide alkaline stripper designed to remove electroless or electrolytic nickel from copper.
Technic Cyless Silver Strip	Silver Stripper	Non-cyanide stripper to remove silver from copper.
Techni HCL Electrolytic Solder Strip	Tin Stripper For Tab Platers	Electrolytic stripper used on auto plating machines for removal of solder from Copper based substrate.

Marking Inks

Protocoat SPN	Thermal cure marking ink	VOC free single component with excellent adhesion on a wide variety of laminates and solder masks.
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Electrolytic Palladium

Pallaspeed S	Pure Palladium For Deep Tank Applications	Pure palladium process engineered for compatibility with aqueous dry film. Wide current density and metal concentration range. Typically utilized where better chemical resistance is required like in deep well applications.
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Catalyst

TechniCatalyst AT4608	Catalyst for activation of Cu surface for ENIG process	High performance palladium activator for fine features and difficult substrates.
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Etching Resist

Protocoat 112	Thermal cure etching and plating resist	Alkaline strippable resist for acid etching and plating solutions.
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Ancillary Equipment

Ancillary Plating Equipment	Upgrades, spare or replacement parts for all plating operations	DC rectifiers, PPR rectifiers, amp hour meters, heaters, filters, ultrasonics, spare parts, retrofits and upgrades.
Anodes and Anode Baskets	All Plating Processes	Platinum clad columbium, Platinized Titanium, Stainless Steel, Iridium Oxide, Cu, Sn, Sn/Pb, Ni.

Equipment

SFT MP 100 and MP200	Vertical high Speed plating Line for Flex and Rigid PCBs	Automatic PCB plater for Cu, Ni, Au. Full panel type and roll to roll. Reduce cost with improved distribution and reduced waste generation.
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Technic ISA System	Insoluble Anode System	Technology to reduce additive consumption with insoluble anodes. The process utilizes a membrane to separate IrO mesh anodes from the plating solution. The system utilizes a special grade of CuO for maintaining copper level in the copper plating solution.
Hoist Systems: Side Arm, Overhead, and Rim Runner	Automatic and Semi-automatic Plating Lines	Custom and turnkey design, vertical plating lines with complete automatic or semi-automatic operation.
Manual Plating Lines and Auxiliary Equipment	Vertical Manual Equipment for All Plating Process Steps	Complete manual plating line are custom designed and built in house.
PC Fast Finger Platers	Automatic Tab Plating	The systems remove solder and precisely apply Nickel and Gold at Minimum tolerances, cutting production times from hours to minutes and saving 25% to 50% on Gold required over conventional tab plating machines.
Technic Resin Gold Recovery System	Recovery of gold	Gold reclaim system model 105 for in tank filter type.

Process Control

Technic EBA	Analysis of organic & inorganic levels in acid copper plating solution	Patented instrument that utilizing a combination of AC & DC voltametry for fast accurate measurement of copper, sulfuric and organic plating additives.
Argus EN Controller	On line control of electroless nickel bath	Two channel controller for measurement of nickel and pH.
Technic Solid State amp/hour and amp/minute meters	All electroplating processes	Measurement of and replenishment of all electroplating solutions.

Semiconductor

Electrolytic Copper

Elevate Cu 6340	Copper Plating	High speed copper plating process capable of depositing copper at 40-60 ASF with virtually no internal stress in the deposit.
Elevate Cu 6370	Copper Plating	High speed copper plating bath that is capable of plating at a rate up to 6 microns per minute. Excellent WIW and WID coplanarity can be achieved on a variety of feature types such as copper pillar and RDL.

Electrolytic Gold

Elevate Gold 7934	Gold plating	A cyanide based electrolytic gold plating process that produces a deposit that exhibits excellent functional performance such as wire bonding and solderability from a very stable and simple to operate solution. Solution can be adjusted to achieve various hardness requirements, from 60-145 Knoop (as plated).
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Elevate Gold 7990 NBV	Gold Plating	Electrolytic sulfite gold process for semiconductor applications that produces pure, soft gold deposits. Operates at an optimum acidic pH of 6.6, making it compatible with almost all photoresists. It produces a bright deposit without the use of harmful grain refiners like thallium and arsenic. Provides excellent coplanarity and step coverage. Can be used for plating several different applications (thicknesses ranging from 0.5 - 100 microns) without major modifications to the solution and can be used on a variety of tool sets.
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Electrolytic Nickel

Elevate Ni 5910	Nickel Plating	Sulfamate process that is designed to produce a low stress, semi-bright, ductile nickel deposit for semiconductor applications. The bath can be used with soluble and insoluble anodes.
Elevate Ni 5950	Nickel Plating	Boric acid free process that produces nickel deposits with similar attributes as a standard nickel electroplating solution. The process can be used for UBM, metal stacking and other semiconductor technologies that utilize a nickel metal deposit.

Electrolytic Alloys

Elevate AuSn 8020	Eutectic Gold-Tin	Gold-tin alloy plating process that produces alloy ranges from 75 – 82% gold content with a corresponding melting point of 280°C – 320°C. Optimum gold-tin alloys are produced from a one-step, single bath process.
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Services

Prototype Wafer Plating	DOE and prototype plating of 50mm-200mm wafers	Technic offers a complete lab service for contract semiconductor plating, using Technic's proprietary SEMCON 2000 chemistry and equipment. The lab can be contracted to perform plating experiments, DOE and prototype plating of 50mm - 200mm wafers.
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Strippers and Etchants

TechniStrip P1331	Stripper for liquid resist	An advanced photoresist stripper that has a wide range of applications from DUV to thick negative resins and passivation layer reworking. Ideal for use in back end applications like TSV, Cu pillar, bumping, etc. Offers complete resin dissolution of thick film photoresist such as THB151N, THB121N, AZ125XT, etc.
TechniStrip NI555	Stripper for Advanced AZ EM Resist	Specially formulated to fully dissolve AZ EM advanced line of photoresist: AZ15nXT, AZ40XT, and AZnLOF 2000 series. High metal compatibility from a DMSO and TMAH free solution.
TechniStrip NF90	Resist stripper	A TMAH free solution that offers similar performance to the TechniStrip NF52. High resin dissolution and very good metal compatibility.
TechniStrip NF52	Resist stripper	A highly effective negative tones photoresist remover used mainly for TSV mask and solder bumping applications. Developed to address laminated photo-resins and liquid resins, the novel stripping formulation of this TMAH/DMSO chemistry exhibits high dissolution performance compared to standard TMAH based blends.
TechniStrip® Micro D2	Photoresist Stripper	TechniStrip® Micro D2 is a versatile photoresist stripper formulated to address resin lift-off and dissolution of negative and positive tone resist. TechniStrip Micro D2 is an environmentally friendly alternative for NMP, DMSO and DMSO/Amine based photoresist strippers.



TechniEtch SLC	Copper Etchant	Highly selective copper seed layer etch chemistry that provides very low pillar undercut and minimal oxidation of tin and tin/silver.
TechniEtch TBR19	Ti, TiN, TiW Etchant	TechniEtch TBR19 is an advanced fluoride free aqueous solution, designed to selectively dissolve titanium and titanium alloy (TiN, TiW) based barriers for far back end of the line interconnect applications. The solution is compatible with most UBM, and copper pillar integration materials such as Cu, Al, Ni, Sn & alloys, glass, organic substrate, etc.
TechniEtch AC12	Gold Etchant	Iodine based metal etchant for use with selective gold applications
TechniEtch CN10	Copper and Nickel Etchant	Provides selective etch and high loading capacity for UBM, RDL, and copper pillar applications. Provides enhanced profile and process control of Cu/Ni metal stack by offering Cu/Ni etch selectively of up to 1/6.

Cleaners

TechniClean IK73	Post etch residue remover	TechniClean IK73 is a post etch residue removal product that has been specifically targeted for the selective removal of highly-inert chemical residues created during the patterning of high-k dielectric metal oxides based on hafnium, zirconium and tantalum. Compatible with a wide range of metals and dielectrics normally present during high-k patterning, TechniClean IK73 functions at room temperature, is very easily rinsed and is suitable for immersion, batch-spray and single-wafer chemical applications.
TechniClean CA25	PER Remover	Post Etch Residue remover that works effectively on various metals including: Tungsten, Al, Cu.
Elevate Cu 6300 Cleaner	Precleaner for electrolytic copper plating	Liquid acid cleaner formulated for the removal of oxides, fingerprint and light resist residues from copper seed layer surfaces prior to electrolytic copper plating.

Process Control

Technic Elevate Analyzer	Elevate bath production monitoring	Technic's Elevate Analyzer was designed to work exclusively with Technic's Elevate semiconductor electroplating solutions. The Elevate Analyzer allows the customer to strictly monitor and control the production plating bath by providing an accurate and quick analysis of each component.
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Solar

Electrolytic Nickel

TechniSol Ni 2428	Electrolytic Nickel Barrier Layer	Electrodeposition nickel process that can be used with Light Induced Plating or conventional electroplating. Process produces a low stress, semi-bright, ductile, low resistivity nickel deposit from a boric acid free electrolyte. Ideal for use as a barrier layer over alternative seed layers and can also be used as a barrier layer over silver paste.
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Electrolytic Copper

TechniSol Cu 3000	Electrolytic Copper Conductive Layer	Electrodeposition process that can be used with Light Induced Plating or conventional electroplating. Formulated to provide high speed plating with good coplanarity in order to maximize the performance of the solar cell and to reduce the footprint of the required plating tool. Can be used to plate standard front-side contact cells with Al BSF, PERC cells, bifacial cells, HUT cells and most other cell types.
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Electrolytic Pure Tin

TechniSol Sn D2480	Electrolytic Pure Tin Solderable Layer	Electrodeposition process that can be used with Light Induced Plating or conventional electroplating. This system was developed for optimum performance as the final step in a nickel, copper, tin metal stack. The process produces tin deposits that protect the copper conductive layer from oxidation during subsequent cell processing. It also provides excellent solderability during module assembly.
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Process Control

Technic Elevate Analyzer	Elevate bath production monitoring	Technic's Elevate Analyzer was designed to work exclusively with Technic's Elevate semiconductor electroplating solutions. The Elevate Analyzer allows the customer to strictly monitor and control the production plating bath by providing an accurate and quick analysis of each component.
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Decorative

Cleaner

Techni Alkaline BN Cleaner	Phosphate free electro or soak cleaner for ferrous and non-ferrous metals.	A phosphate free, general all-purpose cleaner designed for use on both ferrous and non-ferrous metals. It is highly effective as either a soak or electro-cleaner with high soil tolerance making it economical to use. As an electro-cleaner it can be used with both direct and reverse current.
TEC-1010 LF	Electro or Soak Cleaner for brass, steel, and copper	Highly conductive electro-cleaner for removal of light oxide, oils and light buffing compound with excellent low recess cleaning.
Techni Buff Solv	Soak or ultrasonic for copper and brass	Concentrated alkaline liquid cleaner for removing buffing compounds, tarnish and oxides from copper and brass

Activator and Etchant

Technic Acid Salt TAS-1	Acid Activate for steel, brass, copper and passive nickel	Blend of dry acid salts for replacement of sulfuric and hydrochloric acid for pickling metals prior to electroplating.
Technic Acid Salt TAS-3Z	Acid activate for leaded brass, beryllium copper, aluminum, nickel, silver,	Blend of dry acid salts for pickling metals prior to electroplating.

Stripper

Techni Strip Silver	Silver stripper	Cyanide based silver stripper designed to remove silver from nickel, nickel alloy copper, copper alloys and iron substrates with no attack on the bare nickel.
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Envirostrip Ag	Silver Stripper	A non-cyanide electrolytic stripper designed to remove silver from copper, brass, or nickel substrates. This non-chelated product does not generate fumes or spray during operation.
9025 Gold Stripper	Gold Stripper	High speed gold stripping formulation for removal of gold from nickel, nickel alloy, kovar, or nickel protected copper.
Technistrip AU	Gold Stripper	Cyanide based gold stripper prepared from dry mix. Removes gold from most base metals.

Electrolytic Copper

Copper C	Cyanide copper strike	Semi bright deposit to provide adhesion on difficult to plate metals.
Techni Copper LUX	Acidic electrolytic copper plating process	Produces micro-bright, micro-pitting free and ductile deposit. High thickness and excellent corrosion resistance. Can be used with cathode agitation or air insufflation as well.
CUCN	Cyanide copper strike and full build	Bright cyanide copper especially design for difficult to plate substrates such as leaded brass.
Techni Copper P	Pyrophosphate Copper Strike and Plate	Purified liquid concentrates providing a semi-bright finish for steel substrates

Electrolytic Nickel

MX8-M	Rack plating	High leveling one component system.
Technic JB Nickel	Nickel sulfate plating	Bright decorative finish for both rack and barrel plating.
MX-5	Barrel plating	High leveling one component system.

Electrolytic Gold Strike

Technic Acid Gold Strike	Gold strike on difficult to plate base metals	Low pH gold strike with excellent adhesion on tin-nickel, stainless steel, Kovar, titanium, passive nickel and other difficult to plate base metals.
Orostrike C	Gold strike on basis metals	Acid Gold with excellent adhesion on basis metals like nickel with high tolerance for resist contamination.



EAS	Gold strike	Gold strike for stainless steel.
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Electrolytic Gold Plate

Orosene 999 Gold	Decorative hard gold	Hard Gold 24K--Type I, II Grade C designed for both rack and barrel operations.
Cote D'Or	Decorative hard gold	Green-yellow bright hard gold for heavy decorative deposits.
1. Decor 2. Decor C	Decorative hard gold	Brilliant decorative 24K hard gold 24K.
NPD Color Gold	Specialty finish gold	Pink, green and Ni standard alloy additives.

Electrolytic Rhodium

Technic Rhodium	Rhodium plate	Bright white sulfate high throw process.
RH 221 E	Rhodium plate	Bright white sulfate process.
Techni White Rhodium-Ruthenium	Electrolytic Rhodium-Ruthenium Plating Processes	The Techni White Rhodium series of rhodium-based finishes is recommended to provide the ultimate in corrosion protection, particularly for satisfying end user imposed electrolytic sweat test requirements.

Electrolytic Palladium and Palladium Alloy

Pallaspeed	Pure palladium plate	Rhodium-look finish - lower costs can deposit directly on copper, nickel alloys without a strike.
Pallaspeed DW	Decorative Palladium	Brilliant decorative deposit plated directly over copper or nickel alloys

Electrolytic Silver

Silversene DW	Silver plate	Organically brightened deposit for both rack and barrel operation.
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1006 Silver	Silver plate	Mirror-bright ductile decorative deposit with excellent wear resistance.
Silver Cyless II W	Rack and barrel plate	Mirror bright non-cyanide silver with excellent wear resistance for Cu and Cu alloy base materials.

Anti-tarnish

Tarniban 60	Post treatment for silver	An inorganic coating designed to improve the tarnish resistance and solderability of silver deposits, particularly after dry heat thermal exposure. Recommended for rack, barrel, and high speed reel-to-reel applications.
Tarniban	Post treatment for silver and copper	A globally specified organic post-treatment process for the protection of silver and copper surfaces from oxidation or tarnishing. Forms a thin, colorless, transparent film for added corrosion resistance and enhanced lubricity.
Tarniban KS II	Post treatment for silver, gold	Designed to protect silver and gold surfaces from tarnish/oxidation. Highly recommended for applications where silver deposits must pass stringent sulfide compound corrosion tests. It also minimizes nitric acid fume attack on thin gold deposits.

Ancillary Equipment

Ancillary Plating Equipment	Upgrades, spare or replacement parts for all plating operations	DC rectifiers, PPR rectifiers, amp hour meters, heaters, filters, ultrasonics, spare parts, retrofits and upgrades.
Anodes and Anode Baskets	All plating processes	Platinum clad columbium, Platinized Titanium, Stainless Steel, Iridium Oxide, Cu, Sn, Sn/Pb, Ni.
Gold Saver - Resin Recovery System	Recovery of gold and silver	Gold reclaim system for in tank filter type.

Equipment

Hoist Systems: Side Arm, Overhead, and Rim Runner	Automatic and Semi-automatic Plating Lines	Complete custom design vertical plating lines with complete automatic or semi-automatic operation.
Tumbleplater - Barrel Alternative	Open barrel, parts only transport processor	Fully automatic batch processing line transferring only the parts from station to station. Benefits include: reduced waste due to dragout by 75% plus savings of 30-40% on chemistry costs.
Manual Plating Lines and Auxiliary Equipment	Vertical Automatic and Manual Equipment for All Plating Process Steps	Rectifiers, heaters, filters and other related equipment, can be provided off the shelf in most cases. Complete manual plating line are custom designed and built in house.



Process Control

Technic Solid State amp/hour and amp/minute meters	All electroplating processes	Measurement of and replenishment of all electroplating solutions.
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Industrial

Surface Preparation

Technic TSC-1501	Soak cleaner for ferrous and non-ferrous metals	Soak cleaner for removal of most grease and oils from ferrous and non-ferrous metal.
Technic TSC 1508-L	Soak cleaner for ferrous and non-ferrous metals	Water based alkaline cleaner concentrate for ferrous and non-ferrous metals.
Techni Alkaline Zincate	Alkaline Zincate	Process designed to properly prepare aluminum and its alloys for electroless or electrolytic plating.
Techni Buff Solv	Soak or ultrasonic for copper and brass	Concentrated alkaline liquid cleaner for removing buffing compounds, tarnish and oxides from copper and brass.

Activator and Etchant

Techni CU 85	Micro Etch for Copper	Used to deoxidize/activate copper based parts prior to electroplating.
Technic Acid Salt TAS-1	Acid Activate for steel, brass, copper and passive nickel	Blend of dry acid salts for replacement of sulfuric and hydrochloric acid for pickling metals prior to electroplating. Excellent for chrome stripping.
Technic Acid Salt TAS-3Z	Acid activate for zinc die cast, leaded brass, beryllium copper, aluminum, nickel, silver, tin, lead	Blend of dry acid salts for pickling metals prior to electroplating.

Electrolytic Nickel

Woods Nickel Strike	Nickel Strike	Formulation used for improved adhesion over difficult to plate base materials such as Kovar, Alloy 52 and Stainless Steel prior to subsequent plating.
MX8-M Bright Nickel Plating Process	Nickel Plate	Designed for applications where a very white level deposit is required for the final nickel plate.
Techni Nickel HT-2	Nickel Plate	Proprietary nickel process that operates at very low nickel concentrations and has exceptional low current density throwing power.



Techni Nickel S	Nickel Plate	Semi bright Ni sulfamate process. Low stress deposit.
<i>Electroless Nickel</i>		
Techni EN 8200	RoHS Compliant Mid "phos" Electroless Nickel	Designed for high bath loading in plating RoHS compliant mid phos nickel deposit on steel, aluminum and metal alloys.
Techni EN 8500	RoHS Compliant Mid "phos" Electroless Nickel	Designed for high bath loading in plating RoHS compliant mid phos nickel deposit on steel, aluminum and metal alloys. Bath is formulated to be auto ph adjusting.
Techni EN 3500	High "phos" Electroless Nickel	Designed for high bath loading in plating of steel, aluminum and metal alloys.

<i>Electrolytic Copper</i>		
CUCN-Bright Copper Cyanide Process	Cyanide Copper Plate	To provide a protective coat of copper over the base protect prior to subsequent plating.
Copper Cyanide Rochelle Strike	Cyanide Copper Strike	Designed to give good adhesion and coverage with a relative low level of thickness. This is followed by a high deposition bath.
Copper Lux	Acid Copper	Bright acid copper solution used for decorative and electroforming applications.
Techni Copper P Solution	Alkaline Copper	A semi to bright pyrophosphate copper solution used as an alternative to copper cyanide.
Cu Satin	Acid Copper	Deposits a fine grained, high purity satin finish with low organic content.

<i>Electrolytic Silver</i>		
Techni Silver 1025	Rack and barrel plate	Semi- bright to bright silver with excellent wear resistance.
Techni Silver 1050	High speed	Matte to semi-bright 99.9% ductile silver deposit.
Silver Cyles II	Rack and barrel plate	Non-cyanide, semi-bright to bright silver plating process.



Techni White EGB	Tri-alloy (Cu,Sn,Zn) Plating	Brilliant white deposit for decorative applications.
<i>Electrolytic Gold</i>		
Orosene 990	Hard gold for rack and barrel application	Industry standard for hard gold products. Excellent distribution with consistent high yields. Compatible with aqueous resists. High efficiency reduces plating time.
Orosene 990 HS	Hard gold for high speed applications	Very high efficiency, high speed bright plating solution. The solution can be operated at low gold concentrations and at temperatures to 150 F, providing high plating rates with excellent deposit distribution.

<i>Electrolytic Tin and Tin Alloy</i>		
Technistan TP-W	High speed matte/satin pure tin for wire applications	High speed matte pure tin process based on sulfuric acid technology. Offers significant cost advantages to MSA systems.
Technistan TP-5000	Universal matte tin process	Unique sulfate tin process capable of operating in rack, barrel and reel-to-reel lines. Unmatched throwing power and deposit uniformity at all useable current densities. Deposit will reflow mirror bright.
Techni NF JM 3000	High speed pure tin process for reel-to-reel continuous strip applications	High speed matte tin plating process based on MSA. Fully compatible with Techni NF JB 3000 bright tin.
TechniBrite HT 1000	Mirror bright deposits from a sulfate based electrolyte	Designed for use in rack and barrel applications. NPE (nonylphenol ethoxylate) free.
Technistan JB 3000	High speed sulfate bright tin.	Designed for use in reel-to-reel machines at current densities from 10 ASD up to 60 ASD. Runs best at 30 to 35 C.

<i>Anti-tarnish</i>		
Tarniban D	Silver	Organic, thin colorless film with good resistance to corrosion with improved solderability and no effect on electrical performance.
Tarnex	Copper/Copper alloys	Mono molecular film that inhibits corrosion and tarnishing of copper and copper alloys during storage.
Tarniban 60	Silver	Non-organic, thin colorless film with good resistance to corrosion with improved solderability and no effect on electrical performance.
Tarniban KS II	Silver and Gold	Can be applied by immersion or anodically for increased protection. Passes sulfide stain tests.



Techni E-260	Tin and tin alloys	Post-treatment process to protect tin and tin-alloy deposits from oxidation and discoloration when subjected to thermal conditioning, i.e. reflow.
Tarniban C-48	Anti-tarnish for tin deposits	Designed to prevent tin oxide discoloration under humid and warm storage conditions. Will greatly improve steam age solderability performance.

Miscellaneous

Technic Aqua Shed-1	Drying enhancement	Aqueous blend of additives designed to rapidly dry parts by shedding water.
Technistrip AU	Gold Stripper	Cyanide based gold stripper prepared from dry mix. Removes gold from most base metals.
Technic PST Neutralizer	Neutralizer-rinse aid	Neutralizes acidic film from tin or tin lead plating and promotes spot free drying.
9025 Gold Stripper	Gold Stripper	High speed gold stripping formulation for removal of gold from nickel, nickel alloy, kovar, or nickel protected copper base metal.
Techni EN Strip 1700	Electroless nickel stripper	Non cyanide alkaline stripper designed to remove electroless or electrolytic nickel from copper.
Technic Cyless Silver Strip	Silver stripper	Non-cyanide stripper to remove silver from copper.
Techni JA Solder Strip	Single-step solder stripper	Immersion solder strip for removal of solder from copper substrate (peroxide/fluoride base).

Equipment

Tumbleplater - Barrel Alternative	Open barrel, parts only transport processor	Fully automatic batch processing line transferring only the parts from station to station. Benefits include: reduced waste due to dragout by 75% plus savings of 30-40% on chemistry costs.
Hoist Systems: Side Arm, Overhead, and Rim Runner	Automatic and Semi-automatic Plating Lines	Custom and turnkey design, vertical plating lines with complete automatic or semi-automatic operation.
Manual Plating Lines and Auxiliary Equipment	Vertical Automatic and Manual Equipment for All Plating Process Steps	Rectifiers, heaters, filters and other related equipment, can be provided off the shelf in most cases. Complete manual plating line are custom designed and built in house.



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CDPP-2000	Controlled Depth Pin Processing	Continuous, fully enclosed, controlled depth processor for pin plating. Fully automatic cartridge loading and unloading with fast and easy part changeovers.
SBE Plater - Barrel Alternative	Spouted Bed Electrode (SBE) plater	Technic's patented method of electroplating small components such as electronic connectors, discs, pins and SMT chip capacitors and chip resistors.

Ancillary Equipment

Ancillary Plating Equipment	Upgrades, spare or replacement parts for all plating operations	DC rectifiers, PPR rectifiers, amp hour meters, heaters, filters, ultrasonics, spare parts, retrofits and upgrades.
Gold Saver - Resin Recovery System	Recovery of gold and silver	Gold reclaim system for in tank filter type.
Anodes and Anode Baskets	All plating processes	Platinum clad columbium, Platinized Titanium, Stainless Steel, Iridium Oxide, Cu, Sn, Sn/Pb, Ni.

Process Control

Technic Solid State amp/hour and amp/minute meters	All electroplating processes	Measurement of and replenishment of all electroplating solutions.
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LED

Pre-Treatment

Techni Polish 3212	Electropolish	High speed electropolish for use on copper, steel and stainless steel alloys
Technic TEC 1016	Electrolytic cleaner	Alkaline low foaming; chelated. Rapidly removes oils, grease, and other contaminants.
Techni ACT 9600	Mild descaler	Acidic, non-foaming, mildly aggressive chemistry. Effectively removes oxides & heat scale.

Electroplated Copper

Techni Copper ACP	Cyanide copper plating process	Minimized copper peel-off and molding compound delamination.
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Electroplated Nickel

Goldeneye Nickel	Proprietary, electrolytic nickel plating process	Low stress, corrosion resistant deposit.
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Electroplated Silver

Techni Silver LED	Ultra bright silver plating process for rack, barrel, and medium speed reel to reel applications	Ultra bright and reflective silver deposits.
Techni Silver LED HS	Ultra bright silver plating process for high speed, selective applications	Ultra bright and reflective silver deposits.
Techni Silver EHS-3R	Semi-bright to bright silver plating process	Recommended for high speed/selective plating applications. Uses insoluble anodes.
Tarniban LED	Immersion anti-tarnish	Maintains silver deposit brightness (GAM) and reflectivity.
Techniseal	Cathodic electrolytic passivation process	Provides improved corrosion protection and appearance degradation of silver deposits.

