

# PLATING ON PLASTICS



Application for plating on plastics is virtually limitless as the users are diversifying their needs by changing the parts made of plastics. Being a lighter in weight, more corrosion resistant and foremost a less expensive, plastic becomes more and more popular to the industries. ABS (acrylonitrile-butadiene styrene) and ABS-PC are the more preferred plastic suitable for electroplating.

Growel has signed a Technology Transfer & License agreement with HERBERT SCHMIDT OBERFLÄCHENTECHNIK GmbH (HSO) of Germany for manufacture and sale of their entire range of products for Plating on Plastics. This agreement will re-enforce Growel's existing market leadership in the business of providing solutions for surface treatment on a large variety of substrates.

SUZUKI  
KARIZMA



TRUST THE LEADER IN SURFACE FINISHING

# COMPLETE ROAD SHOW

## GINPLATE PC 452

- Non-silicated, mild alkaline soak degreaser system
- Efficiently removes soils and grease at lower concentration

## GINPLATE CONDITIONER 474

- Strong chromic acid based micro chemical etching system to obtain true deposit adhesion on plastics.
- Avoids mechanical roughening.

## MIST FREE LGL

- Solvent free wetting agent suitably designed to be used in chromic acid etching process to get desired 'press button effect'.

## GINPLATE REDUCER CR / CR (AF)

- Reducing agent after etching, improves the 'bath life' of activator.
- Organic based system does not affect the surface condition of the chemically etched plastic substrates.

## GINSOL ACTIVATOR ULTRA / GINPLATE ACTIVATOR 444

- High effective single step Palladium Tin colloids with smaller partial size – ensures lower consumption.
- Specially designed to metalize the plastic prior to electro-deposition.

## GINSOL ACCELERATOR / GINPLATE GK 120

- Removes tin from the processed surface after palladium-tin colloids – does not react with palladium & hence, reduces rejections of 'void spots'.
- Facilitates initial nucleation of electroless nickel or copper.

## GINPLATE CU 803

- Highly stable electroless copper plating process.
- Faster rate of deposition with broad 'working window' stable even up to 900C.

## GINSOL NI KB 601 / GINPLATE Ni 414 (ABS)

- Room temperature operated electroless nickel process with an enhanced 'bath life'.
- Imparts a uniform conductive 'pore-free' fine grained semi-bright electroless nickel base coat on activated plastic surface.

## GINSOL HD CONDUCTOR

- Major step forward to provide an activation process wherein replacement of tin occurs with copper metal in a situ in one step.
- Eliminates the need of acceleration & electroless deposition, this shorten the line length.

## GINSOL PRECODIP

- Non-electrolytic copper exchange process after electroless deposition.
- Produces thin copper deposit improves the conductivity, eliminates burning at HCD and also, dissolution of deposited electroless nickel deposits at the LCD.

## CUPROBRITE ACID COPPER

- Wide brightening range with excellent leveling.
- Suitable even for higher deposit thickness.
- Fully aqueous system, suitable in usage even at higher temperature.

## GINPLATE AD 481 (AF)

- Ammonia free activation process for bright copper under-coats prior to nickel plating.
- Improves adhesion to the subsequent deposits.

## DUCTOLITE MULTI-LAYER NICKEL

- Complete multi-layer nickel plating program of Semi-bright, sulphur rich sand witch Tri-nickel, Bright nickel, Micro-crack & Micro-porous nickel plating
- Produces fully adherent composite nickel deposits with different electro-chemical potentials to offer high corrosion resistance.

## UNISPEC / SPECTRA BRIGHT NICKEL

- Broad range of products with superb brightness and levelling.
- Meets all our customers' needs - both technical and commercial.

## DUROCRACK ACT

- Unique electrolytic activation process for nickel prior to chrome plating.
- Ensures good, un-interrupted, burn free chrome deposit.

## DUROBRITE SRHS SALT / DUROCRACK CHROME SALT

- Mixed catalysed chrome plating process with good throwing power.
- Produces eye-appealing bluish appearance.

## CHROME NEUTRALISER

- Alkaline chrome reducing agent.
- Precipitates as chromium hydroxide in the working bath, reduces load towards effluent treatment
- Removes acidic residues from recessed areas, & also enhances corrosion protection.

## DUROBRITE CHROME III / 3000 / TRIPLUS CHROME 300

- Chrome plating from trivalent electrolyte - both sulphate & chloride types.
- Produces color shades with best 'LAB' values - almost resembling that from traditional chrome plating bath.
- Meets corrosion resistance desired by automotive OEM's - even passes recent 'Russian mud-test'.



## METSTRIP RACK STRIPPER

Electrolytic stripping process, removes deposited copper, nickel & chrome deposits in 'one-go'.

**Total Solution Provider for its Valuable Customers.**

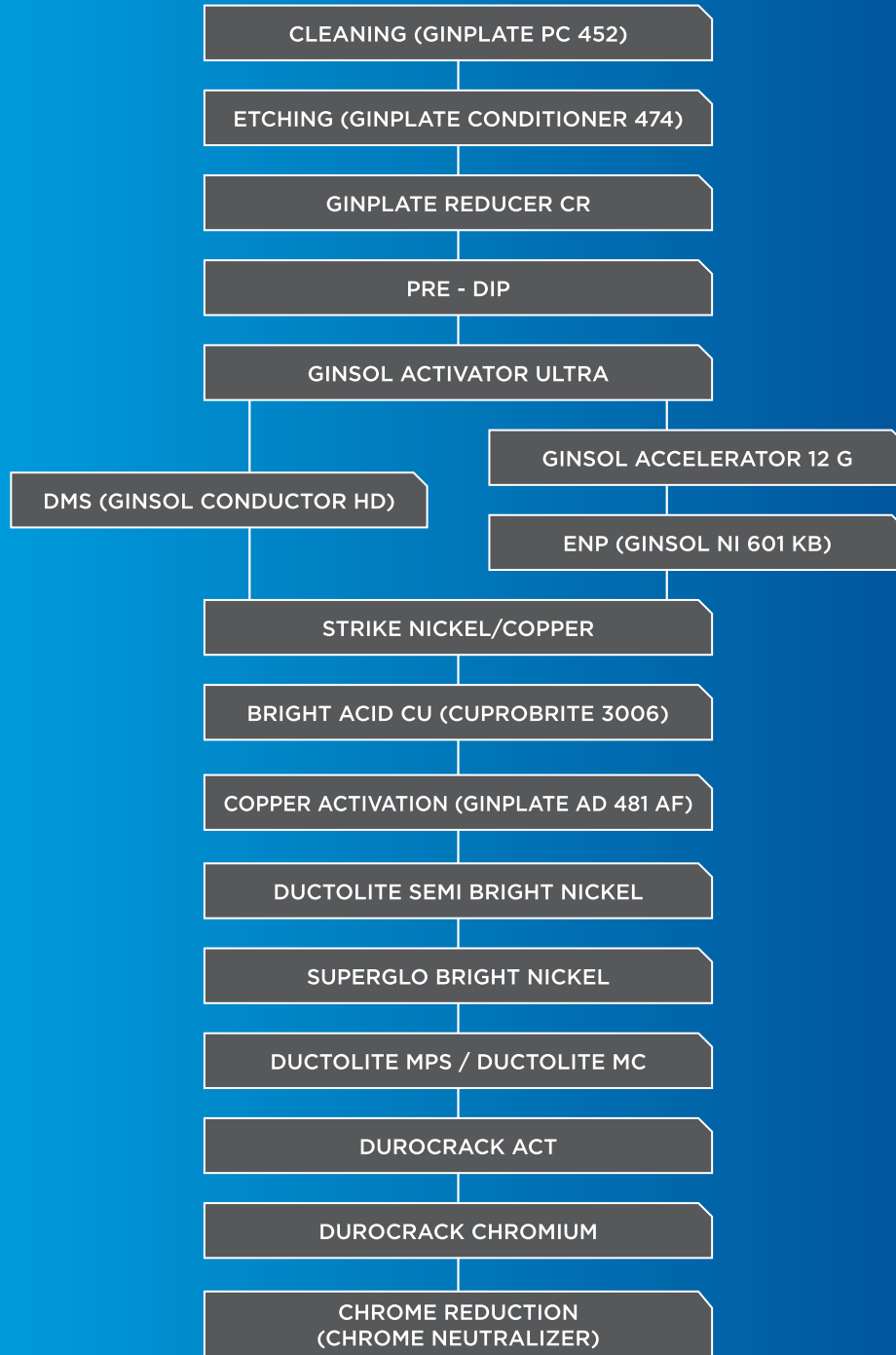
**Technical Support having all testing facilities:**

- CASS Test for Corrosion Resistance Evaluation
- Salt Spray Test
- Thermal Cycle Testing For Adhesion
- Plating Thickness (Coulometric, XRF, Sectioning & Microscopic Technique)
- STEP Test
- Micro Porosity & Crack Pattern
- Ductility Test
- Complete Chemical Analysis for all bath solutions



**EXPERIENCE THE INFINITE ADVANTAGES**

## PROCESS SEQUENCE



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