Standard Plating Process for Ixef® PARA

Plating Method
The method used is the standard humid process, also referred to as PC/ABS plating or Pd-Sn process. The PC/ABS plating line consists in a succession of functional baths.

Plating Process
Plating by humid way process can be divided into four major steps:

Surface Cleaning
Removal of all substances having a bad influence on the plating process such as mold grease, releasing agents or dust

Surface Preparation
Etching by acid is a surface pre-treatment that allows the further adhesion of an intermediate layer (electrically conductive)

Activation
Producing an electrically conductive surface by hooking catalytic sites to the prepared surface

Metallization in Two Consecutive Phases
1. Metal deposit on the electrically conductive polymer surface, the metal deposit is obtained by an auto-catalytic process – an electroless bath
2. Metal deposit with an electrolytic process using current – an electrolytic bath
Ixef® PARA Specifications
The results of plating Ixef® polyarylamide (PARA) must take into account the material specificities:

Polyamide Family Semi-Crystalline Structure
• Amorphous and crystalline areas

Composite Material
• Resin + glass fibers/mineral fillers
• Ixef® PARA particularities: top pure resin layer

Those specificities can affect the metal surface (adhesion, orange peel, pitting, etc.) when non-appropriate process parameters are used.

Ixef® PARA and Satin/Matt Chrome Plating
Ixef® PARA 1022 plated with Pd-Sn process:

Surface Cleaning
• ISO-propanol

Surface Preparation
• Chromic acid

Activation
• Seeding with Pd-Sn colloidal solution

Metallization
• Electroless metal deposit: Cu/Ni
• Electrolytic metal deposit: Cu/Ni/Cr

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