CONSOL ACC X 919

Bright Acid Copper

- **Advanced High-Speed, Extremely Bright Copper deposits.**
- **Pore free, Soft Ductile, Flows & Levels**
  Hides surface imperfections.
- **Acid Copper = Nickel Saver + Ask CMF to save more.**
- **Excellent base for Plating, Antiquing, Lacquering.**
- **Unbeatable for plating on Plastics.**
- **Stable chemistry. Tolerant to Higher Operating Temperatures.**
- **Concentrated Brighteners – Low Consumption, Economical.**

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FEATURES AND BENEFITS

CONSOL ACC-X 919

BRIGHT ACID COPPER PLATING PROCESS

- Advanced High Speed, High Leveling, Extremely Bright Acid Copper plating process that produces, pore free, ductile Copper deposits.
- Deposits serve as an excellent base for plating on Plastics & Metals, for antiquing and lacquering operations. User friendly, stable chemistry.
- Helps save Nickel in Non Specification Appearance Plating operations.
- Produces soft ductile Copper deposits that flow and level the surface, hide surface imperfections and cover surface porosity.
- Process is unbeatable for plating on plastics with excellent Thermal Cycling characteristics.
- Concentrated Brighteners, Low Consumption, Economical to use.

SOLUTION COMPOSITION & OPERATING CONDITIONS

	Range	***Optimum***
Copper (as metal)	45 ~ 60 g/l	50 ~ 55 g/l
Copper Sulphate $5H_2O$ (equivalent)	180 ~ 240 g/l	200 ~ 220 g/l
Sulphuric Acid Pure SG 1.84	50 ~ 65 g/l	60 g/l
Chloride Ion	40 ~ 140 mg/l	65 mg/l
Sodium Chloride (equivalent)	65 ~ 230 mg/l	105 mg/l
CONSOL ACC-X 919 Make-Up	2 ~ 5 m/l	4 ml/l
CONSOL ACC-X 919 Brightener A	0.28 ~ 0.48 ml/l	0.4 ml/l
CONSOL ACC-X 919 Brightener B	Only For Replenishment	
Agitation	Low pressure Air – Vigorous & Uniform, Oil Free, Mechanical	
Anodes	Special Copper anodes with Phosphorous content of 0.02 to 0.06%.	
Anode Basket & Bags	Titanium with Polypropylene bags.	
Cathode Current Density	2.0 ~ 6.0 A/dm^2	
Anode Current Density	Less than 2.5 $amps/dm^2$	
Voltage	1.0 – 6.0 V (Depending on the current density & bath loading.)	
Current Efficiency	100%	
Cooling Coils	Titanium or Teflon.	
Temperature	20^o ~ 35^o C (preferably 24^o – 28^oC)	
pH Value	Less than 1	
Filtration	Continuous, total bath volume, every hour	
Rate of Deposition	1 Micron / min at 4.5 A/dm^2	

MAINTENANCE

The replenishment of the ***CONSOL ACC-X 919 Additives*** is based on 1000 amp/hours at **24^o ~ 30^o C.**, is as follows:

***CONSOL ACC-X 919 Brightener A*:** **50 ~ 100 mls per 1000 Amp/hrs.**
***CONSOL ACC-X 919 Brightener B*:** **40 ~ 90 mls per 1000 Amp/hrs.**
***CONSOL ACC-X 919 Brightener MU*:** **10 ~ 25 mls per 1000 Amp/hrs.**

The Consumption figures are given as a rough guide for the bath maintenance, the consumption may vary depending upon the degree of brilliance and leveling required.

Attention: This sheet is only meant to provide Features and Benefits of the process mentioned. For detailed Usage, Please refer the product Technical Data Sheet. For Safety, handling and Chemical information please refer the Safety Data Sheet. These can be provided through a *Consolidated Metal Finishing Pvt. Ltd.* representatives or requesting us for the same by email.