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CL TIN COBALT SNC WHITE

Application

CL Tin Cobalt SNC white is a stable plating process for which pyrophosphate is used for complexing agent. The plated surface is similar to a chromium colour and provides a unique beautiful appearance when applied over a bright- or satin nickel layer.

Characteristics

1. The good bath stability guarantees uniform coloured layer.
2. The bath is controlled based on analysis, therefore no complex control procedure necessary.
3. No toxic substances are used which allows an easy waste water treatment.

Bath composition

Make-up

Conductivity salt SNC	250 g/l
Metal salt SN	15 g/l
Metal salt Co	25 g/l
CL SNC 1	100 ml/l
CL SNC 2	10 ml/l

Maintenance

	<u>Optimum</u>	<u>Range</u>
Tin	12 g/l	8 – 15 g/l
Cobalt	5 g/l	2 – 7 g/l
Potassium pyrophosphate	250 g/l	200 – 300 g/l
CL SNC 1	100 ml/l	75 – 125 ml/l
CL SNC 2	10 ml/l	5 - 20 ml/l

Working conditions

	<u>Optimum</u>	<u>Range</u>
Cathodic current density (A/dm ²)	0,7	0,2 - 1
Temperature (°C)	50	45 - 55
Deposition time (min.)	2	1 - 5
pH	8,7	8,5 - 8,8

Bankverbindung : Stadt – Sparkasse Solingen, BLZ 342 500 00, Konto nr. 5353248
HRB 5025 Amtsgericht Solingen. Ust-ID-Nr. DE 813 359 241
Geschäftsführer : Fred Lüttke

Equipment

Tank	: hard PVC or Polypropylene tanks
Heating	: Teflon or quartz heating elements
Bath movement	: mechanical movement or pump circulation (no air agitation)
Anodes	: carbon
Anode-cathode range	: anode – cathode = 1 : 1 to 1 : 2
Bath movement	: cathodic movement
Ventilation	: necessary
Filtration	: continuous filtration (active carbon not necessary)

Make-up

Clean the working tank, fill up to the half with water, heat up to 50 °C add the specified amount of Conductivity salt to the tank and solve properly.

Solve the Metal salt SN separately in hot water, add this sludge look a like solution slowly under stirring into the working tank, add the Metal salt Co and solve.

Add the specified amount of CL SNC 1 and CL SNC 2 whilst thoroughly stirring.

Please note that the CL SNC 2 floats like oil on the surface when added but this will dissolve after stirring. Adjust the pH to 8.7 with 20% polyphosphoric acid. Add water until the required volume is reached.

Working sequence

Bright nickel or Satin nickel

Static rinse

Rinse 2 x

CL Tin-Cobalt SNC white

Static rinse

Rinse 2 x

Drying

Electrolyte maintenance

Replenishing of metal salts and additives

Please find below the theoretical consumption values per 100 Ah

Tin	: 170 g
Cobalt	: 40 g
SNC 1	: 100 ml
SNC 2	: 50 ml

By operation are the components mostly consumed by drag-out. We recommend to check the electrolyte analytically until the consumption values for the specific application is determined.

pH control

The pH value must be checked daily. For adjustment are potassium hydroxide or polyphosphoric acid required. As the plating operation progresses, pH is likely to drop gradually.

Removement of CL Tin Cobalt SNC white layer

To remove the CL Tin Cobalt SNC white layer from nickel is a 1 : 1 hydrochloric acid required. A 0,1 to 0,15 µm thick layer can be removed in 10 minutes at room temperature.

Safety Indication

The necessary precautions measures should be adhered to in handling the chemicals.

Chemicals without a hazard indication should not been seen as harmless. Also when the handling of chemicals are not due to hazard identification, we recommend to handle with care and avoid for example skin contact.

Warranty

Seller makes not warranty, whether of merchantability, fitness or otherwise, expressed or implied, concerning the product other than it shall be of the specification stated herein.

Any recommendations made by Seller concerning the use of the product are believed to be reliable, but seller makes no warranty of the results obtained. Buyer agrees to inspect the product supplied hereunder immediately after delivery. Failure to give notice in writing as aforesaid within the specified time constitutes and unqualified acceptance of the product and a waiver of all claims with respect thereto.

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