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riag Act 654

Activation of nickel before bright chromium plating

riag Act 654 is a cathodic activation of electrolytic nickel before bright chromium plating. This activation replaces the electroless activation dip in chromic acid solutions.

Despite the very low cathodic current density **riag Act 654** steadily prevents the deposition of hazy or stained chromium layers. They are caused by passive nickel layers due to different reasons (e.g. rinsing problem, too much time between nickel and chromium plating).

Make up of 100 Litres

riag Act 654 Salt

Standard value
0.26 kg

The tank is filled at $\frac{2}{3}$ with DI-water. Add the calculated amount of **riag Act 654 Salt** and stir until the salt is dissolved. Finally add DI-water until the working level has been reached.

Maintenance

The function of **riag Act 654** is mainly influenced by its concentration and not too much impurities. Therefore the procedure of corrections and new makeup should be fixed individually.

Operating Parameters

Temperature	15 – 25 °C
Cathodic current density	10 – 50 mA/dm ²
Anode material	use lead alloy anodes: PbSn with 6 % Sn
Rectifiers:	Usually 10 Volt units. The rectifiers must provide a residual ripple of less than 5 % within the whole current range.
Treating time	30 – 120 s, optimum 60 s
Agitation	not required
Tank material	SM-steel with rubber or special plastic lining
Heating	normally not required (immersion heaters)
Fume extraction	Recommended
After-treatment	without rinsing plating in a bright chromium process (riag Cr 320 or riag Cr 321)

Environmental Considerations

The concentrates as well as their rinsing waters contain chromium (VI) and are extremely dangerous for waste water treatment plants. The waste water needs to be prepared according legal regulations before getting in the canalisation.

We recommend wearing safety glasses, gloves and protective clothing during working with chromic acid. Chemicals shall not be stored below 10 °C. For further information please consult the material safety data sheets.

Liability

This instruction manual was compiled with reference to the state of the art and all current standards, and is based on the long-term knowledge and experience of riag. However, riag cannot monitor compliance with this instruction manual and the methods described herein at the customer/end-user's premises. Work carried out with riag products must be adapted accordingly to meet local conditions. In particular, riag cannot accept liability for damage, loss or cost incurred due to a failure to adhere to this instruction manual, improper application of the methods, unauthorised technical modifications, insufficient maintenance or the absence of maintenance in respect of the requisite technical hardware or equipment, or in the event of use by unqualified personnel. riag is not liable for damage or loss caused by riag or its employees except where intention or gross negligence can be proved. riag furthermore reserves the right to make changes in relation to products, methods and the instruction manual without prior notice.

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