

Anti-tarnish protection CRFs

Status 5.2015



Product description

CRFs is an anti-tarnish solution for silver which does not change the appearance of the silver. It forms a protective film that acts as a chemical insulation and repels dirt and water.

Supplied as

Anti-Tarnish Bath CRFs (ready to use)
Make-Up Concentrate CRFs A (100 ml concentrate)
Make-Up Concentrate CRFs A (1 l concentrate)

Item no. 81012138
Item no. 81012137
Item no. 81012136

Equipment

Container:	PVC, PP, PE
Heating element:	PTFE or quartz glass heater
Extraction:	recommended
Moving product:	not required
Bath agitation:	it is necessary to agitate the bath from a volume of ten litres to avoid local heat building up above 68°C

Operating parameters

Temperature:	60–65°C
Time:	3–5 minutes

Bath preparation

Bath chemicals for ten litres of bath formulation:

1,000 ml of Make-Up Concentrate CRFs
9 l of deionised water (<10 µS)

Procedure

The tank must be thoroughly cleaned. Fill the tank up to two-thirds with deionised water and heat to 50°C. Heat up the make-up concentrate in the bottle to 50°C in a water bath. Then shake the heated make-up concentrate and add under constant agitation. Then fill the tank to its final volume with deionised water and mix thoroughly. Check the bath temperature.

Process overview

For the process to achieve the best result, the product should be newly silver-plated and **not** degreased. If the coating does need to be cleaned, this should be performed in an ultrasonic bath with subsequent pickling.

Process sequence

- Immersion in anti-tarnish protection (60–65°C, 3–5 min)
- Warm rinse (deionised water 60°C, 1 min)
- Static rinse
- Flow rinse
- Drying (with hot air approx. 60°C)

Bath monitoring

Any losses as a result of evaporation can be compensated for with deionised water. The bath should be replenished every 14 days. To replenish the bath, add 25 ml of Make-Up Concentrate CRFs per litre of the bath. The replenishing solution must be heated up in the bottle in the water bath to 50°C before being added. We also recommend regularly monitoring the pH value because a pH value greater than 8 requires a new bath solution.

Safety measures

The dip solution or parts of this solution as well as aerosols must **not** under any circumstances come into contact with other electroplating baths because this can render them unusable. Take particular care to keep away from stainless-steel baths. We recommend connecting the immersion bath and its rinse water to a separate water circuit.

Hazard information, storage, disposal

The occupational safety measures and regulations specified in the safety data sheet must be observed. The baths must be sealed and stored separately from food in suitable and labelled containers. Spent bath solutions and drag-out rinses must **not** be discharged into the waste water without first being treated.

The information on our product and the method are based on intensive research and technical experience of this application. We provide these results to the best of our knowledge and reserve the right to make technical changes in the course of product development.

However, this does not relieve the user of their responsibility to check our specifications for their own use before application. If you have any questions or would like a consultation, please contact our application technology service at any time. We would also be happy to discuss our further electroplating product range.