Technical Data Sheet

Electrophoretic Lacquer EB-409

Electrophoretic lacquer EB-409 is an electroplating process base on chromate providing and anti-tarnish protection of silver and brass. It is suitable for both barrel and rack plating process and operates cathodically without solvent at room temperature. This system provide decorative and anti-tarnish service to silver and brass.

Make-Up Method:-

- Firstly clean tank thoroughly (use PP/PVC Tank)
- Fill tank 2/3rd with RO water.
- Add required quantity of EB-409 and mix well.

Operating Parameters:-

Parameters	Silver	Brass
Concentration	50ml/litter	70ml/litter
Density	4.2 B°	4.2 B°
Temperature	Ambient	Ambient
Current Density	1-8 Amp/dm2 (1.5 optimum)	1-8 Amp/dm2 (1.5 optimum)
Bath Voltage	Rack:3-4 V Barrel :7-8 V	Rack:3-4 V Barrel : 7-8 V
Treatment Time	30-120 Seconds	30-120 Seconds
Filtration	Required but not absolutely necessary	Required but not absolutely necessary

Process Flow:-

- Silver plating / Brass plating
- Water rinse
- Water rinse
- Lacquer EB-408
- Drain
- Hot air dry (50-60°c temperature)

Replenishment:-

Keep the bath density in standard value approx. 15ml/ltr of the concentrated EB-408 may increase density by 1 beum. If the electrolyte is not in operation it must be covered, thus avoiding contamination etc. if the protective layer is no more satisfactory (after the potassium sulfide test) a new bath has to be setup.

Prior to be treated in our EB-408 process all parts have to be rinsed very carefully. Sometimes, depending on the bright silver or bright brass process, the parts should be degreased electrolytically and afterward rinsed again thoroughly in running water. If possible, a subsequent rinsing in de-ionized water is recommended.

Due to the fact, that the anti-tarnish layer is very thin, the treated parts are very sensitive against abrasion and mechanical treatment. Please take care that the freshly treated (wet) parts are handled with utmost care.

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Special care has to be taken during barrel treatment, thus avoiding a attack of the surface.
There are some possibilities to reduce such attacks:

- Unloading of the barrel with minimum speed and unloading parts on soft ground.
- Reduction of the barrel speed during both rinsing and treatment.

Troubleshooting:-
In case the anti-tarnishing film is getting yellow, instead of remaining transparent, the treatment time was too long. The same effect might occur if the silver electrolyte was not adjusted best possible giving already a yellow layer after silver-plating. Some types of silver baths have a tendency toward giving yellowish layers due to their brighteners. In such cases it is must to change the brighteners.

Heat resistance:-
The temperature resistance of the protective effect is up to 250°C (duration: 5 minutes) During higher temperature (360°C, 5 minutes) or rather longer time of temperature exposure (30 minutes at 250°C) the protection effect will be influenced negatively, yet not totally eliminated.

Equipment:-
PCV/ PP tanks are recommended

Anode:-
Stainless Steel anodes are required, surface area ratio to cathode 1:1

Disposal / Removal:-
By immersion for approx. 20 seconds at ambient temperature into hydrochloric acid – diluted 1:1 with demineralized water, it is possible to remove the anti-tarnish coating. A removal of the protective film will be necessary in case of a subsequent electroplating (rhodium-plating or gold plating thus guaranteeing a perfect adhesion of such layers.

Miscellaneous:-
Information concerning storage refers to storage in closed original packages under conditions stated on the label.

Cautions:

- Must Wear PPE's Rubber Gloves, Long shoes and apron during chemicals mixing.