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TECHNICAL DATA SHEET

SILVER BRIGHTNER AND SILVER ADDITIVE ARE EXCELLENT PROCESS FOR SILVER ON SILVER (MIRROR BRIGHT BLUISH WHITE PLATING ON WHITE METAL), IN THE MANUFACTURE OF ITEMS

APPLICATION:

- Anklets (payals).
- Chains.
- Imitation jewelry
- Casket hardware and novelty decorative items.
- Electronic industry,.
- Tableware, articles, jewellery etc.

ADVANTAGES :

- Mirror bright deposit with uniform thickness
- Very high purity(non metallic brightener).
- Easy to control and maintenance of bath.
- Excellent throwing and covering powder.
- Superior ductility and very low stress.

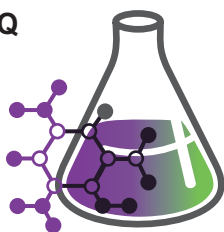
TECHNICAL DETAIL:

• FOR NEW BATH :

- SILVER BRIGHTNER : 50 ML/L
- SILVER ADDITIVE : 30 ML/L
- PURE SILVER METAL (Ag) : 7-30 GM/L
- SILVER POTTASIAM CYANIDE : 15- 60 GM/L
- KCN SALT : 180-200 GM /L
- CARBONATE : 45-55 GM/L
- KOH : FOR PH MAINTAIN
- TEMP. : 25-28° C
- P^H : 12-12.5
- PLATING TIME : 60-100 SEC
- CURRENT : 30-100 amp

• FOR REGULAR BATH: (ON THS BASIS OF JEWELRY WEIGHT)

- SILVER BRIGHTNER : MAX 3 ML/KG
- SILVER ADDITIVE : MAX 2 ML/KG
- PURE SILVER METAL (Ag) : 7-30 GM/L
- SILVER POTTASIAM CYANIDE : 15- 60 GM/L
- KCN SALT : 180-200 GM /L
- CARBONATE : 45-55 GM/L
- KOH : FOR PH MAINTAIN
- TEMP. : 25-28° C
- P^H : 12-12.5
- PLATING TIME : 60-100 SEC
- CURRENT : 30-100 amp



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HULL CELL TESTING:

- BATH CAPACITY: 267 ml. Std. Cell.
- Current : 1.0 amp
- Time : 2.0-3.0 minutes
- Agitation : Mechanical
- Temperature : 20-25 °C
- Anode : Pure Silver
- Cathode : Polished Brass

ANALYTICAL TEST PROCEDURE:

FREE CYANIDE :

- Pipette 1 ml solution into a 300 ml Erlenmeyer flask.
- Add 100 ml distilled water and a pinch of Potassium Iodide solution.
- Titrate with 0.1 N Silver Nitrate solution to a cloudy end point (vol = A ml).

$$\text{Calculation: } \frac{A \times 13.0 \times \text{Normality of Silver Nitrate}}{0.1 \text{ N AgNO}_3} = \text{g/lit. of Potassium cyanide}$$

SILVER METAL:

- Pipette 2 ml solution into a 300 ml Erlenmeyer flask.
- Add 10 ml conc. Sulphuric Acid and 10 ml conc. Nitric Acid.
- Boil until the Silver Sulphate formed has dissolved (till dense white fumes observed in flask)
- Cool and add 100 ml distilled water add pinch of Ferric Ammonium Sulphate indicator
- Titrate with 0.1 N Potassium Thiocyanate solution to brown end point (vol = B ml)

$$\text{Calculation: } \frac{B \times 5.4 \times \text{Normality of Potassium Thiocyanate}}{0.1 \text{ N KSCN}} = \text{g/lit. of Silver}$$

CARBONATE :

- Pipette 10 ml solution into a 600 ml beaker, and add 300 ml distilled water and 20 ml (30% Barium chloride solution)
- Bring to the boil and precipitate settle and filter through a filter paper. Rinse the beaker and precipitate thoroughly with boiling water.
- Return the filter paper with precipitate to the beaker.
- Add 200 ml cold water and stir.
- Add 6 drops methyl orange indicator
- titrate with 1 N Hydrochloric Acid to pink endpoint (vol = C ml)
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$$\text{Calculation: } \frac{C \times 6.91 \times \text{Normality of Hydrochloric Acid}}{1 \text{ N HCl}} = \text{g/lit. Potassium carbonate}$$