PATEL CHEMICALS **TECHNICAL DATA SHEET**

UNISTAR BRIGHT CHROME SALT

UNISTAR BRIGHT CHROME SALT is a conventional sulphate catalyst type bath for decorative chrome plating. The bath is less corrosive and needs simpler equipment compared to high speed mixed catalyst bath. The non etching properties makes it highly suitable for hollow components where complete stopping off is difficult.

BATH MAKE UP

	DECORATIVE
UNISTAR BRIGHT CHROME SALT	250 – 300 g/ltr
UNISTAR CHROME CONDUCTING SALT	5 – 10 g/ltr

OPERATING CONDITIONS

Density	22 - 25° Be
Temperature	40° – 50° C
Cathode current density	15 – 25 A/dm2
Anode current density	5 – 10 A/dm2

BATH PREPARATION

Fill the plating tank approximately 2/3rd of its final volume with warm water(50°C)preferably deionised water. Gradually add the required quantity of UNISTAR CHROME SALT and stir to dissolve. The salt must be completely dissolved. Add the required quantity of UNISTAR CHROME CONDUCTING SALT and stir to dissolve. Add water to make up the level.

Place the anodes in the tank and electrolyse the bath for few hours at 6 volt at 50°C. Now the bath is ready for plating.

EQUIPMENT

PVC tanks reinforced with FRP, PVC lined or tin lead alloy (containing 7% tin) lined MS tanks are suitable. Suitable exhaust system with scrubbing facilities should be provided. For heating the bath, lead tin alloy, tantalum or Teflon coils are recommended. Rise in temperature because of higher voltage and operational current requires proper cooling arrangements to be made.

ANODES

7% tin lead alloy anodes are recommended. Round anodes are preferred over flat anodes. During idling period the anodes becomes passive and this can be cleaned mechanically or by immersing in alkaline cleaner. When the solution is to be idle for more than a few days, the anodes may be removed from the solution and kept outside. On resumption of plating, anodes should be elctrolysis to form the protective lead peroxide film on anodes.

POWER SUPPLY

Usually 10 - 15 volt units are used. Oil immersed 3 phase rectifiers with residual ripple below 5% is recommended.

BATH MAINTENANCE

The solution concentration can be controlled with the help of density measurement alone. Periodic analysis of the bath should be carried out to determine the chromic acid and sulphate content. The sulphate content can be increased by addition of UNISTAR CHROME CONDUCTING SALT. Barium hydroxide or Barium carbonate can be used to decrease the sulphate. To reduce the sulphate by 1 g/ltr , 2 -3 g/ltr of barium carbonate is to be added. Chloride ions are harmful in chrome bath hence care should be taken to avoid Chloride drag in from rinse water. Heavy metallic ion contamination should also be avoided. More than 7.5 g/ltr interferes in the plating operation.

CAUTION

While handling contact with eyes, skin and clothing should be avoided. Care should be taken to avoid breathing dust from the product or dust from the solution containing chromic acid. Protective clothing, rubber gloves and safety goggles should be provided. In the event of eye contact wash with plenty of water. For skin contact flush skin with plenty of water for 15-20 min.

NOTE

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