

TECHNICAL DATA SHEET

SUPER BLUE PASSIVATION

Super Blue Passivation is an economical and easy to handle blue passivations process. Good pH stability, good corrosion resistance and an excellent adhesion to all zinc coated surfaces are some of the notable features of the process.

An immediate and through rinse is recommended after Super Blue Passivation to avoid any iridescent. The brightness of zinc deposit plays a major role in the final lusture of finish obtained by Super Blue Passivation.

OPERATING CONDITIONS :

Super Blue Passivation	4.0 g/l
Nitric acid (42° Be)	12-15 cc/l
Time	5-15 sec
pH	0.5-1.5

BATH PREPARATION :

Fill the tank 2/3rd of full water and add 4 g/l of Super Blue Passivation and stir to mix. To this add 15cc/l of Nitric Acid and make up the level and stir to ensure through mixing.

OPERATION :

Zinc plated components are to be rinsed and then immersed in Super Blue Passivation bath to get a bright blush finish, followed by cold water rinse. However, a final hot water rinse is recommended for fast drying.

EQUIPMENT :

Rigid polyvinyl chloride, PVC lined steel or polyethylene containers are suitable for preparing Super Blue Passivation solution.

CONTROL:

The life of the bath depends on the work carried out and Super Blue Passivation has to be added whenever required. However the low cost of make-up and operations permits the spent solution to be discarded and preparation of a fresh solution.

ANALYSIS:**PROCEDURE :**

1. Pipette 50 ml of the Super Blue Passivation solution into a 250 ml Erlenmeyer flask.
2. Add 50 ml of water and 10 ml of 25% HCL.
3. Add 2 grams of KI crystals, mix to dissolve and allow solution to stand for about 2 minutes
4. Titrate with 0.1 N $\text{Na}_2\text{S}_2\text{O}_3$ to a straw colour, add about 2 ml of starch solution and continue titration to a blue green end point.

CALCULATIONS :

$$4 \times (\text{ml } \text{Na}_2\text{S}_2\text{O}_3 \times \text{Normality } \text{Na}_2\text{S}_2\text{O}_3) = \text{Super Blue Passivation}$$

ANALYSIS FOR NITRIC ACID :**PROCEDURE :**

1. Pipette 50 ml of the Super Blue Passivation solution into a 250 ml Erlenmeyer flask.
2. Add 100 ml of water and about 5 drops to methyl orange indicator.
3. Titrate to a yellow end point with 1 N NaOH.

CALCULATIONS :

$$1.2 \times (\text{ml NaOH} \times \text{Normality NaOH}) = \text{cc/liter } 42^\circ\text{Be nitric acid}$$

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