TECHNICAL DATA SHEET

i-FIN AL BLUE

i-Fin Al blue is a single liquid concentrate used in the aluminum electrolyte coloring of gold bath. It provides various shades of blue colour. The variation depends upon dying time & voltage applied on the article.

It provides great resistance to light and weather conditions, which is obtained by means of an alternate current treatment. The shades of Blue depends upon thickness & porosity of the anodize aluminum article. A deeper colour is obtained by increasing the immersion time.

i-Fin Al blue is pale yellow colour product containing a mixture of metallic salt, complexes and various stabilizers necessary for the correct functioning. It provides uniform dispersion along with very high penetration ability of dyes to the articles. A dipping process using I-Fin Al Blue postdip chemicals, further enhances the bluish finish.

OPERATING CONDITIONS

Process -1		**Electro colour process**	
	Unit	**Range**	**Optimum**
i-Fin Al Blue	gm/ltr	10 -20	20
Temperature	℃	25-30	28
Voltage (DC)	V	12-15	14
Time	Seconds	30-90	60

Process -2		**Immersion process**	
	Unit	**Range**	**Optimum**
i-Fin Al Blue postdip	ml/ltr	175 -225	200
pH	-	0.5-1.0	0.8
Temperature	℃	25-30	28
Time	Seconds	30-90	60

BATH MAKE UP

- Fill the tank with deionized water up to ¾ of its volume.
- Add the required i-Fin Al Blue, distributing it over the whole tank surface, and mix well again.
- Stir well for at least one hour and add deionized water up to the final volume.
- The bath is ready for operation after all the ingredients have been mixed thoroughly.

OPERATING PROCESS

1) Immerse the parts in the bath, adjust the agitation timer for about ½ minute work.
2) Adjust the waiting timer in such a way that the parts remain without current for at least 1–2 minutes.
3) Operate the programmer in order that the tension may reach in a continuous or gradual form i.e. 18 V in one minute.
4) Once 18 V is reached, fix the selected time by means of one of the timers placed in the cabinet. At the end of this time, the current is automatically stopped and a sound alarm starts to blow.
5) Take the parts out of the bath. Check the coloring and fix the timer at the appropriate lapse so that all subsequent loads may get the same shade.
6) If deeper or lighter shades are required, repeat the proceeding operations and once these shades are achieved, fix the necessary time in each one of the timers of the programmer.
7) To subsequently reproduce the master shades, it is necessary to operate a switch.

EQUIPMENT

Tank:
The tanks must be lined with a material that may be resistant to acids (e.g. PVC, polypropylene, fibre-glass, polyester, etc.)

Filtration:
It is advisable to circulate the bath by agitator and/or filtration. Since certain tin IV compounds develop during the work, it is recommended to pass the liquid to another tank every 6-8 months and to clean the bottom of the tank before replacing the working solution in it.

Electrode:
The electrode should be made of S.S 316 and the surface area should be at least as large as that of the surface to be treated.

RACKING

It is essential to have a perfect contact. The rack contacts ought to be completely clean and have a suitable size for a uniform distribution of the current.

Profiles and similar parts must be placed on the racks inclined to make easier the escape of the small bubbles that are likely to form in the electrolyte. As connecting material, only aluminium must be used. The parts must be tied with wires.

CURRENT SUPPLY

A three – phase alternating current transformer should be designed for secondary voltage from 0 to 25 volts. It is necessary to use a transformer capable of giving a tension varying from 0 to 25 volts and a current strength depending on the surface of the parts to be colored. Normally, it is advisable to use amperage that is a 50 % of the maximum nominal amperage available in the rectifier of the anodizing tank.

It is necessary to incorporate an automatic control system that may allow varying and fixing the voltage and the time necessary to achieve a given shade.

CONTROL

i-Fin Al Blue : 2-3 ml/ft^2
The amount can be higher or lower depending on the operating conditions, temperature, electrolyte composition, treatment time, alloy composition, anodizing conditions,

NECESSARY PRECAUTION

The oxide layer on electrode in coloured bath undergoes fluctuation of voltage resulting in uneven shade of color. The electrode should be brushed and cleaned. The affected part must be stripped, freshly anodized and dyed carefully again. If the shade is too bright, the electrode should be immersed in the electrolyte once again and re-dyed for few seconds depending on the color desired with higher voltage by 1 or 2 volt than previous voltage given. If the shade is too dark, the job must be immersed for a few seconds without current depending on the color desired.

WASTE TREATMENT

For more details, refer **MSDS.**

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