

*Barrier Coating Saves Additives!!*

# **$\text{IrO}_2$ + Barrier Anode**

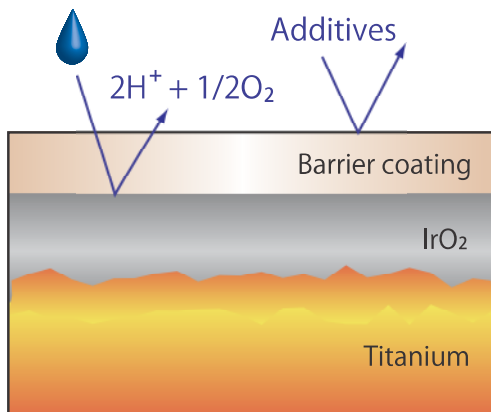
*Electro plating anodes for printed circuit board*

# Goals of a higher order

This is the new standard of IrO<sub>2</sub> anode for build-up PCB.

It makes much easier to control Via-filling process !

## ■ Cross section



Structure:

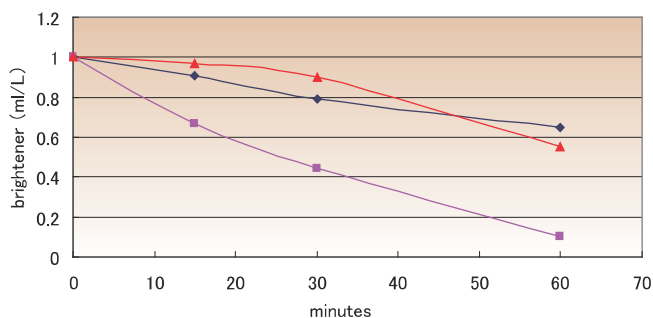
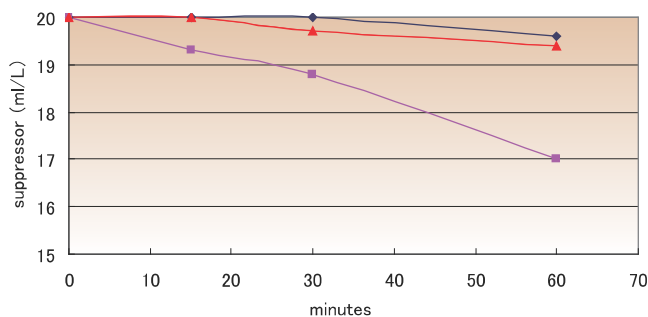
Titanium plates, Titanium expanded metals

Electro plating anodes for printed circuit board of copper sulfate have been changing from soluble anodes to insoluble ones. IrO<sub>2</sub> anodes, the mainstream of them, have superiority in performance aspect, but have consumed additives which contact anode surface at a high rate. Usually it is common to use diaphragm in the plating tank as a countermeasure. This IrO<sub>2</sub>+Barrier Anode can singly solve the both issues, because the anode surface (top coating) functions as diaphragm too.

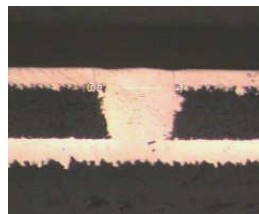


**The IrO<sub>2</sub> +Barrier Anodes will simultaneously resolve the both problems of consuming additives and diaphragm maintenance.**

## ■ Consumption test of additives <Via-filling copper plating>※

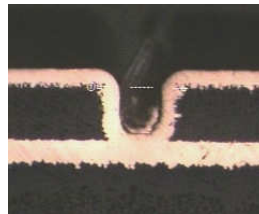


### ▲ IrO<sub>2</sub> +barrier anode



Excellent Via-filling is achieved due to a good additive density, same as 'Cu ball with Ti basket' .

### ■ Usual IrO<sub>2</sub> anode



Consumption of additives causes filling failure. It is necessary to use diaphragm box around anode.

※Data provided by: EBARA-UDYLITE Co.,Ltd.



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