# **PLATING PRODUCTS IND PVT LTD**

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## WHITE BRONZE

**P-Brite WB** is a tin -copper formulation which produces the much desired white -bronze color for architectural trim , snap , fasteners , zip sliders etc.

**P-Brite WB** has outstanding throwing power and stability. The brightener does not decompose and is rela tively unaffected by the presence of organic and metallic contamination that effects other Brightener systems.

**P-Brite WB** is an easy to maintain bath with very low brightener consumption that produces uniform color and consistent results.

It is a singl e additive replenishment brightener system.

P-Brite WB maybe readily plated in either barrel or rack installations.

#### THE PROCESS

#### **P-Brite WB Operating conditions**

	Range	Optimum	Unit
<b>Copper content</b> <b>Tin Content</b>	5-8.5 9-14	6.8 12.9	gm/lit gm/lit
Sodium Cyanide	35-40	38	gm/lit

Sodium Carbonate25–3528gm/litP-Brite WB-R0.5% by volume300-W,Wetter 0.125% by volume Operating Temperature 45–

**60C** 

#### FUNCTION OF ADDITION AGENTS

**P-Brite WB BRIGHTENER** is a make-up brightener and is used during the initial charge.

**P-Brite WB BRIGHTENER** is also added as the replenisher brightener and is added as needed by Hull Cell test to maintain the luster of the plate. It is consumed at a rate of approximately 100ml every 1000 amp./hours.

**300-W** provides wetting , reduces gassing and reduces the effects of organic contamination. The quantity is not critical, but enough should be present to provide for a small amount of foam on the surface.

**P-Brite WB Replenisher** is a replenisher for alloy metals and is added at 400 – 500 ml at every 1000 amp / hours

Periodically, a sample of the solution should be sent to PPI lab for comparative analysis before making any addition.

Anode	:	Graphite Anode
Anode to cathode ratio:		2:1
Cathode current de	nsity:	1 to 80 ASF

#### AGITATION

Air , cathode rod or barrel rotation (2-3 RPM). Air agitation is preferred because it permits higher current density plating.

#### FILTRATION

Constant filtration with two turnovers per hour is required.

#### VOLTAGE

Up to 12 volts for barrel plating and 1 to 7.5 volts for rack plating.

#### pН

Not monitored , but over 10.5.

#### TANK

Rubber or Koroseal lined steel or polypropylene.

#### VENTILATION

Forced ventilation required.

**HEATING ELEMENTS** Titanium preferred.

**Process Hints :** 

The articles to be plated have to be free from Oxide , oil and grease. Before plating , adequate degreasing , pickling as well as thorough rinsing operation is necessary . It is advisable to immerse the articles in 2-5% Sodium Cyanide solution as pre-dip before plating in **P-Brite WB** process.

#### **Troubleshooting:**

PROBLEMS	CAUSE	REMEDY
1. Colour to yellow	<ul><li> Low tin content</li><li> Low cyanide</li></ul>	<ul><li>Add Replenisher</li><li>Add Cyanide</li></ul>
2. Colour to pale or whitish	□ pH too low	□ Add hydroxide
3. Bloomed Deposit	<ul> <li>High Temperature</li> <li>Incorrect tin : copper ratio</li> </ul>	<ul> <li>Adjust the temperature</li> <li>Adjust the ratio</li> </ul>
4. Burning in HCD	<ul><li>High Temperature</li><li>Low alloy content</li></ul>	<ul><li> Adjust the temperature</li><li> Add Replenisher</li></ul>
5. Colour non uniform	□ Too low cyanide	□ Add cyanide

### **IMPORTANT NOTICE : for industrial use only.**

The following is made in lieu of all warranties, expressed or implied, including the implied warranties of merchantability and fitness for purpose.

Neither seller nor manufacturer shall be liable either in tort or in contract for any loss or damage , direct , incidental or consequential arising out of the use or the inability to use the product.