

BALL GRAINED ALUMINIUM PLATES

Traditional lithographic drawing materials can be used in the same way on ball ground plates as they are on lithographic limestone. The plates can be printed on traditional direct lithography presses, offset lithography presses and intaglio presses. If using a direct lithography press, the plate has to be raised up on a plate backer. Either a stone or a metal backer prior to printing. The plates are lightweight and portable and can be easily cut down by hand to the required size.

The grained metal plate, unlike lithographic stone, is not porous, so the grain structure of the plate is where the grease from the drawing materials is held. These aluminium plates can be etched with gum arabic for lightly drawn areas and a gum arabic and phosphoric acid solution for more heavily drawn areas.

Instructions for preparing plates for printing

Ball grained plates must be prepped prior to drawing. This is to remove any surface dirt, dust or oxidation which may prevent drawing materials tightly bonding to the grain structure. The solution deposits acid salts onto the surface of the plate which aid its receptivity to grease and the etch.

The prep solution for aluminium is non-toxic ($\frac{1}{4}$ tsp citric acid to 300 - 500ml warm water) Citric can easily be obtained, mixed and used in a home studio set up. Clean the plate with a brand new cellulose sponge which has never had gum arabic on it and the prepping solution. Dry quickly to prevent oxidation.

- Prepare the edges of a plate by gently filing and rounding off the corners. Protect the grained surface with tissue to prevent scratches or grease being transferred to it from handling.
- Once the drawing is complete, apply talc or french chalk and a film of gum arabic. Apply stronger etches through the wet gum on darker areas of drawing as necessary. Buff with a muslin cloth.
- Rest plate for 30 minutes.
- Remove drawing material with a solvent. The gum is not solvent soluble and will protect the non-drawn areas.
- Buff in asphaltum/ a printing base or some ink reduced with a little solvent.
- Using a wet cloth dissolve the gum arabic layer with water. Sponge with a cellulose sponge and roll on the plate with ink. Alternately sponge and roll until the image looks rich and full.
- Dry the plate, talc the image and repeat the etches. Buff the gum later with a muslin cloth. Rest plate for 30 mins.
- The plate is ready to print.