



## Metallic Inks

Metallic inks consist of aluminum powder in silver inks (bronze powder in golds), in an offset vehicle system.

The brilliance is dependent on the leafing properties of the metal powder. These leafing properties can also lead to rub issues. In general, the more brilliant the color, the poorer the rub resistance.

Overprinting with varnish will improve the rub resistance, however, the brilliance will suffer since the metallic ink will not be able to leaf, the metallic particles are forced to lay flat.

Metallic inks have a shelf life up to six months. They are formulated using aromatic free solvents which do not contain sulfur. The shelf life has been extended since these solvents do not lead to oxidation problems which result in tarnishing.

### 1). Trapping

Best results will be obtained when the Metallic ink is dry trapped. However, with some effort acceptable results can be achieved wet trapping if lower densities can be run on the metallic ink involved.

### 2). Sequencing

Due to their makeup, metallic inks are generally low in tack and ideally they should be applied as the last down ink. However, due to the layout of some jobs, it is not always possible to print metallics from the last unit, e.g. if black type is present on the form, since metallic inks are opaque.

To improve the trap, two adjustments can be made:

- A). Increase the tack of the metallic ink, e.g. add 5% body gum.
- B). Reduce the tack of the superimposed ink, e.g. add 1-2% tack reducer.

### 3). Mixing Fountain Solution

It may be necessary to run alcohol with metallic inks, 8-10% is suggested and will yield the best results.

### 4). Overcoatings

Any overcoat will lessen the brilliance of the metallic since the leading properties will be lost. In order of rub resistance, U.V. coatings will give the best rub, followed by acrylic water based coatings, then conventional overprint varnish.

It should be noted that **U.V. coating should not be applied over metallic inks which have received a prior water based coating.** Since inter-coat adhesion problems have been observed and flaking of the coating away from the ink can occur.

### 5). Piling and Transfer Problems

Piling and transfer problems can often be overcome by the addition of 5% overprint varnish. This will often help prevent ghosting situations.

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