T-51® TECHNICAL TIPS

Townsend Industries, Altoona, Iowa 50009 ◆ Phone 1-800-247-2262 or 1-515-967-4261 ◆ FAX 1-515-967-7519

Bulletin On The Use Of Water Miscible Washes

With the increase of many print shops using water miscible roller washes, Townsend Industries is seeing a marked increase in problems related to rubber roller contamination. Customers using water miscible washes may experience rubber roller contamination problems.

Water miscible washes are formulated to remove water soluble materials in a roller system associated with plate cleaners, gums, paper lint and calcium carbonate (a residue produced by alkaline paper that will get trapped in the pores of the rubber). Miscible washes contain surfactants which help the solvent mix with water. Surfactant as a residue in the pores of a rubber roller will cause problems.

Problems associated with roller contamination due to the use of water miscible washes are:

Roller Swelling: A condition where a roller residual strip is thicker or thinner on the ends as compared to the middle.

A. Usually presents itself as wider in the center and tapered at the ends of the roller.
B. Can occur in a few short months with some water miscible solutions or if decontamination of the rollers is not routinely done.
C. The condition can be worsened if the wash is improperly mixed or being used straight.

Solutions: Replace the rollers. Mix the solution according to the manufacturer's recommendations or discontinue using that solution.

Piling: Contaminated rubber causing a build up of ink on the rubber rollers.

A. Caused by the wash being improperly mixed or being used straight.
B. Lack of routine decontamination of the rollers.

Solutions: Mix the solution according to manufacturer's recommendations or discontinue using that solution. Routinely decontaminate the rollers.

Stripping: The result of a rubber roller not accepting or holding ink on it's surface.

A. Surfactant, paper lint, calcium carbonate, etc. trapped in pores of the rubber.
B. Lack of routine decontamination of the rollers.

Solutions: Mix the solution according to manufacturer's recommendations or discontinue using that solution. Routinely decontaminate the rollers.

Emulsification: A result of waterlogging or breakdown of an ink.

A. Surfactant, paper lint, calcium carbonate, etc. trapped in the pores of the rubber.
B. Lack of routine decontamination of the rollers.

Solutions: Mix the solution according to manufacturer's recommendations or discontinue using that solution. Routinely decontaminate the rollers.

Surfactants, paper lint, calcium carbonate, etc. **must** be removed from the pores of the rubber rollers or any of the above situations may result in a relatively short period of time. Water miscible washes must be mixed according to manufacturer's recommendations. However, Townsend Industries recommends a follow up wash with a 50% water 50% water miscible wash mixture, followed by a final warm water wash, be performed routinely for anyone who is experiencing any of the above symptoms. For those severe cases of contamination a 1 oz. of vinegar to a quart of warm water may have to be used several times to thoroughly decontaminate the rubber. If this action does not rectify the problem then replacement of the rubber rollers is inevitable.