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The use of Alcohol

The use of Iso Propyl Alcohol (IPA) in the fountain solution system to help clean printing, is becoming less favoured due to environmental issues of solvent emissions. However, IPA is the best surface tension controller for lithography and also increases the viscosity of the water, thus assisting a better water flow rate for dampening.

12% of IPA increases the viscosity of tap water by a factor of 2, and this improves the flow rate of dampening solution by a factor of 1.34.

This does not however apply to the commercially available alcohol substitutes. Where IPA is used, a decrease in the fountain solution temperature from 18.5°C to 12.5°C will increase the viscosity of the water by 14%. Elevated temperatures will however cause evaporation of IPA, and thus continual replenishing and checking by specific gravity is necessary.

Salt Deposits

Tap water, unlike de-ionised or reverse osmosis water is high in calcium salts. These totally or partially dissolved calcium sulphate or calcium bicarbonate solids are converted to calcium carbonate precipitate as the temperature increases.

This "lime-slurry" precipitate builds up on printing plates, causing "blinding", and also on the chrome/steel rollers leading to severe "stripping".

Technical Audits

Our technical service team in the field during the technical audits carried out at our printer's factories, are constantly monitoring temperature variations by means of the "portable infra-red heat sensor gun".

The enclosed press-schematic is used to record temperatures at various places on the press, chill rolls, web, etc. so that we can monitor changes and thus help the printer remedy press problems.

A recent U.K. survey of Heatset customers showed that 70% of press problems could be traced back to temperature variations due to mechanical problems or lack of temperature control of water inputs and flow rates.

By now, our field technical-service men have a large library of press problems, caused and resolved by attention to temperature controls in the press room.

Remember, each press, press room and water system is different and expertise and technology is there to help our customers.

_____ offers more than ink, we offer a full technical service when the printer needs help.