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## ISOPROPYL ALCOHOL

### For Printing Needs

Isopropyl Alcohol alters the viscosity and flow characteristics of water; solutions without alcohol do not flow as well and will need less nip pressure between the rollers. Alcohol is a solvent that dilutes the ink, and when running with an alcohol replacement fountain less ink and water should be required to produce acceptable colour. Alcohol reduces surface tension of the dampening solution. Surface tension is the microscopic attractive force between liquid molecules that makes water form a droplet. When this force is reduced by alcohol, the droplet “relaxes”, and the same volume of water will spread thinner to cover a greater area of the plate. This spreading is sometimes referred to, quite correctly, as wetting.

Since alcohol is used in such a high concentration, usually around 10% the alcohol molecules are abundant and will migrate very quickly to the surface of the water, which is where we need their surface tension-reducing abilities. This can be important with a high speed dynamic process like printing.

Because alcohol evaporates so readily, it reduced the amount of fountain solution carried across to the stock and also to the ink, evaporating swiftly because of the mechanical heat generated during printing. Alcohol slightly increases the fountain solution viscosity (or body), which gives a thinner more uniform film allowing the press operator better control over the dampening system.

Alcohol is mild ink solvent, inhibiting ink build up and feedback into the fountain duct.

Biocidal activity of alcohol helps to prevent the growth of fungus, bacteria and mold which can block hoses and filters, shift pH, destroy desensitizers, and contaminate rollers.

The surface activity of alcohol as it evaporates interferes with foam formation, and will also break any bubbles already formed. Even at the low concentrations around 10% used in printing it is reasonable antifoam.