

Treading the Machine Approvals Minefield

Machine approvals on press chemicals are complicated and vary from country to country, as Mladen Dugec explains.

IT MAY seem a simple question - what blanket or roller wash do I use for my new press? Whatever the press installer or demonstrator says, right? Maybe not.

More and more press and roller manufacturers are following the trend of specifying the types of blanket and roller washes suitable to use on their equipment.

German manufacturers such as MAN Roland, Heidelberg, Baldwin Grafotec, Konig & Bauer and KBA have criteria in place for determining which blanket or roller washes can be used on their presses and automated washing systems.

These criteria are assessed by the FOGRA Graphic Technology Research Association in Germany. FOGRA tests blanket and roller washes for various properties such as chemical resistance of ink rollers, printing plates, blankets and material for hoses and seals, miscibility with water and hydrocarbons, flashpoint, iodine number, residue on evaporation, viscosity, temperature stability and emulsion stability.

The specifications for the washing solvent are as follows: flashpoint greater than 55°C (to make in non-flammable in Germany), benzene content less than 0.1 per cent (known carcinogen), toluene and xylene content less than one per cent (highly flammable and narcotic), aromatic hydrocarbon content (C9 or greater) less than one per cent (irritating and narcotic), no CFCs, FCFCs, terpenes, n-hexane, secondary amines and amides (attack various organs), and no substances which are detrimental to health.

These specifications were determined by Employers Liability Insurance Association for Printing and Paper Processing, the Institute for Work Safety, the German Printing Trades Association, equipment manufacturers and FOGRA.

Chemical suppliers pay several thousand deutschmarks to have their products tested. If they pass, they are issued with a FOGRA certificate and are included on a list of FOGRA-approved products.

This all appears straightforward. Chemical suppliers need to formulate and test a product or products which meet the above criteria. It is then safe to use this product on a new press from the manufacturers mentioned above.

Unfortunately for Australian printers this isn't quite so. Firstly in Germany, a flashpoint above 55°C is considered non-flammable, hence storage restrictions are lessened. In Australia 61°C is the cutoff. Hence a product may be FOGRA-approved but still considered flammable by Australian criteria.

The situation is further complicated when a product is claimed to be FOGRA-approved when the formulation for the product isn't the same as that tested by

FOGRA. This is most often claimed by suppliers who have overseas affiliates and it is a cheap way of getting around the three-month testing schedule.

Unfortunately, as FOGRA has stated, "If it cannot be guaranteed that exactly the same components are used, we are afraid to inform you that, in this case, a complete test will be necessary."

It would be very unlikely that a local manufacturer would go to the expense of importing 'exactly' the same raw materials as used by their principals overseas.

The only guarantee of FOGRA approval is the FOGRA certificate itself made out to the company selling the product. Similarly, Baldwin US and Baldwin Germany need to issue documentation which shows the wash solvent has been tested for their systems. Again beware - a washup system supplied by Baldwin Germany need to use washup approved by Baldwin Germany not Baldwin US. A statement such as 'Baldwin Approved' gives insufficient information.

Once a printer gets to access a variety of FOGRA or Baldwin Germany-approved products, they will realise they are not as strong as washes they may have used in the past and that they give similar washing results.

This is because of the specifications being so specific and rigid that few raw materials are suitable. It takes an inventive and determined formulator to look beyond commonly available raw materials to come up with a cleaning solvent to meet all health and safety criteria, that won't harm any press parts and still give an excellent cleaning result on blankets and rollers.

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