Tips & Tricks

Environmentally Friendly Cleaning

Using cleaning agents sparingly and minimizing water consumption are the first steps towards designing an environmentally sound washup program. In either case, the automatic washup systems from Heidelberger Druckmaschinen AG help ensure that wash procedures are carried out in an environmentally friendly manner.

In order to significantly reduce air pollutants in the pressroom and in the environment, low-emission cleaning agents have been on the market since the drupa 1990. These cleaning agents are made up of hardly volatile hydrocarbon mixtures, vegetable oil esters, or mixtures of these. When these products came on the market, however, technical problems regarding the compatibility of certain materials in the printing presses arose.

Thus, printing press manufacturers, working with the Fogra Graphic Technology Research Association, the Berufsgenossenschaft Druck und Papierverarbeitung (an institution for statutory accident insurance and prevention in the printing and paper processing industry), the German Printing and Media Industries Federation and IG Media came up with an agreement, the "Industry initiative for the reduction of solvent emissions in offset printing."

Its goals are to minimize solvent emissions in offset printing and thus protect people and the environment, and to limit the risk of damage to machines with a technical clearance test for cleaning agents.

Fogra's specialized laboratory is commissioned by cleaning agents manufacturers to perform this technical clearance test as a prerequisite for the smooth use of washing agents within the operation. They then test for Heidelberger Druckmaschinen AG,

- the cleaning agent's physical-chemical parameters (including miscibility with water, viscosity, temperature behavior, stability and iodine count),
- the washing agent's compatibility with non-metallic materials (rollers, printing blankets, hose and seal materials) as well as
- with metallic materials (machine coatings, metallic components, printing plates).

In a swelling test, three identical roller parts are immersed in the cleaning agent for 24 hours at room temperature. Often the cleaning agent causes the rubber material to swell, which means that an increase in mass and volume of the roller parts can be determined. If this gain surpasses set limit values, it can no longer be assumed that a smooth operation is possible. The test assembly for a swelling test with roller parts is depicted in Illustration 1. Since some types of cleaning agents can corrode the coating (Illustration 2), the interaction between cleaning agent and the machine coating is also tested.

Once the individual tests have been completed, Heidelberg receives a report from Fogra with the results from the clearance test and then decides if the product is suitable for use with its machines. If successful, the cleaning agent manufacturer receives a test certificate from Fogra (Illustration 3).

Products which have passed the test are compiled in a list which is continuously updated by Fogra. The most current version of this list can be found on Fogra's homepage: www.fogra.org/washes/index.html. Over 290 products from manufacturers all over the world have already been successfully certified for use in Heidelberg machines. ■

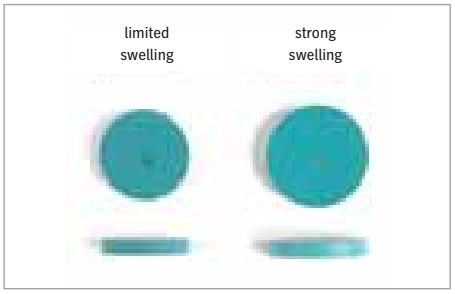

Illustration 1: Example with two cleaning agents: The first cleaning agent shows little interaction with the roller part (left), and the second cleaning agent shows a strong interaction.

Illustration 2: Corrosion of the machine coating after reaction to a particularly harsh cleaning agent.


Test Certificate

"Öko-Grün"

Öko Umwelt GmbH

Illustration 3: Example of a test certificate.