

Disposal and recycling of materials printed with UV curing inkjet inks

UV curing inks have been used in the conventional printing industry for many years, to print onto a wide variety of materials. The disposal or recycling of these printed materials has therefore been safely undertaken for some time. As the volume of material printed with UV curing inkjet inks continues to grow it is appropriate to review the situation from an inkjet perspective.

The most important ink-related factors affecting the disposal or recycling of printed materials are the chemistry of the ink and the ink film thickness. Conventional and inkjet UV curing inks use the same basic chemistry, whilst the printed ink film thickness of UV curing inkjet is similar to conventional screen printing. The issues surrounding the disposal and recycling of UV inkjet printed materials are therefore no different from conventionally printed materials.

The appropriate waste disposal of printed materials is determined largely by the nature of the substrate, because the ink generally forms only a very small proportion of the total weight. In common with other types of ink, waste material printed with UV curing inkjet inks is considered as non-hazardous. The biodegradation of UV curing inkjet inks is no different from conventional UV inks and would not be expected significantly to affect the overall biodegradability of the printed material.

The recycling of materials printed with UV curing inkjet inks presents the same challenges as conventional UV inks. Paper and board printed with UV curing inks and coatings is currently being recycled. One method of recycling is to repulp the paper product and UV curing inks have been shown to be readily repulpable by the flotation process¹.

In relation to safety, health and environmental issues the selection of raw materials in the formulation of UV curing inkjet inks is guided by the same principles as for conventional inks². Legislative requirements are respected and chemical exclusion lists are taken into account where required.

¹ David J Korn, RadTech Report May/June 2005 pp47-49 'Recyclability of UV and EB Printed and Coated Paper'

² European Printing Ink Association 'Exclusion List for Printing Inks and Related Products' latest update available on www.eupia.org