

# ENVIRONMENTAL IMPACT

## of Large Format Display Prints



In response to inquiries regarding differences between display printing technologies and their impact on the environment, we have prepared the attached tables, providing a comparison between silver halide and inkjet printing systems. Although there are some minor differences, the overall environmental impacts of the two systems are remarkably similar. This information, along with your requirements for image quality, location and duration of display and cost, are all important factors in choosing the right display technology.

	Large Format Traditional Photographic Products	Large Format Inkjet (UV-Curable, Solvent, Eco-solvent, Latex) Products
<b>Components of Display Materials</b>		
<b>Image Producing Materials</b>	Silver halide emulsions are coated on PET (polyethylene terephthalate) base material during manufacturing and supplied to the lab where image formation occurs through laser light exposure and chemical processing.	PET base materials are supplied to the lab where inkjet inks are applied to form the image. Different surface coatings may be applied to make the substrate receptive to inks. Heat is often applied to cure and dry the inks.
<b>Film Base Material</b>	 Base material is PET. The final image represents less than 0.1% of the total weight of the materials.	
<b>Paper Base Material</b>	KODAK PROFESSIONAL ENDURA Papers are derived from renewable resources and bear the Programme for the Endorsement of Forest Certification (PEFC) certified sources; a forestry management certification. For other manufacturers' papers, forestry certification may vary or not apply at all.	
<b>Environmental Information in Lab Print Production</b>		
<b>Air Emissions to Environment</b>	Exhaust system for heat and humidity	Exhaust system for heat and solvent vapors
<b>Water Usage</b>	Discharge is satisfactorily treated in sewage treatment plant.	None
<b>Energy Consumption</b>	Yes	Yes
<b>Resource Conservation</b>	<ul style="list-style-type: none"> <li>Over 99.9% of the silver in the image producing layer is removed from the final product and recycled.</li> <li>Process RA-4 chemical solutions can be recycled and reused, minimizing effluents.</li> </ul>	Typically, solvent(s) are not recovered.
<b>Recycled Content in PET Base Material</b>	Adding recycled content to PET base material is not feasible due to industry standards for image quality and surface uniformity.	

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Large Format Traditional  
Photographic Products

Large Format Inkjet (UV-Curable,  
Solvent, Eco-solvent, Latex) Products

**Environmental Information in Lab Print Production (Continued)**

<p><b>Image Permanence</b></p>	<p>Excellent image stability is provided over a wide range of humidity levels and typical atmospheric pollutants, including ozone. Image permanence tests using exposure to high intensity light also yield results well in excess of typical customer requirements for retail, in-store display.</p>	<p>All inkjet systems have some sensitivity to humidity and atmospheric pollutants, e.g., ozone. The magnitude typically depends on the inks used, the substrates used, and whether or not the image is laminated. Depending on these factors, the degree of degradation could be noticeable enough that it falls well short of customer requirements. Light permanence of these systems is typically very good, particularly with the use of pigmented ink sets.</p>
<p><b>Product Packaging</b></p>	<p>Recyclable</p>	<p>Recyclable</p>
<p><b>Disposal of Film Based Prints</b></p>	<p>At the end of a campaign, display materials can be recycled, although the facilities for doing so may not exist in all retail locations. If not available, an attractive alternative is disposal via incineration with energy recovery. If suitable incineration facilities are unavailable; prints may be disposed of directly in a landfill without risk of any adverse environmental effects.</p>	
<p><b>Disposal of Resin Paper Based Prints</b></p>	<p>The most environmentally responsible method of handling disposal of these materials is via incineration with energy recovery. If suitable incineration facilities are unavailable; prints may be disposed of in a landfill without any risk of adverse environmental effects.</p>	
<p><b>Manufacturing Wastes</b></p>	<p>Kodak Alaris, for cost avoidance and sound environmental practices, reuses waste streams in the manufacturing process wherever possible. Other manufacturers' management of waste streams may be similar, or it may vary in comparison to the efforts of Kodak Alaris to minimize the environmental impact of our manufacturing and distribution processes.</p>	

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