

Archiving business documents

HP 940 Officejet inks

hit PRINT



Archive your business, legal and personal documents for decades

With HP OfficeJet Pro 8500 series printers and Original HP 940 Officejet inks, documents printed on standard quality plain paper—including paper with the ColorLok® logo—will retain quality, usability and legibility for decades under typical storage conditions.

Just as photos are affected by the elements, so are black text and color documents. A typical document storage condition should control the following elements:

- **Light**—Store documents in a dark environment if possible. Exposure to light should only occur during brief and periodic viewings of the document, and the light intensity should not exceed that of a standard home or office environment.
- **Humidity**—Keep documents dry and away from excessive humidity. The ideal relative humidity for document preservation is 50 percent. The typical office or home environment should provide adequate humidity control.
- **Temperature**—Store documents away from excessive heat. A temperature of 23°C or 72°F is ideal. The typical office or home environment should provide adequate temperature control.
- **Pollutants**—Avoid storing documents where they will be exposed to pollutants such as cigarette smoke, ozone and smog.

Just as with many consumer goods, you should always store your document in a cool, dry place. An office or other room in a home provides adequate conditions for document preservation, and a storage method can be as simple as a closed folder stored in a desk drawer, a filing cabinet, or a file storage box or chest.

Obviously, the document will need to be removed from storage from time to time for access and viewing. Just remember to return your document to storage immediately after use to avoid prolonged exposure to light, moisture, heat or pollutants.

HP archival metric for documents

HP estimates how long an archived document will retain its black text and color quality by using an accelerated dark storage test. Print samples are kept in a controlled environment that resembles a typical document storage condition: absence of light, 50 percent relative humidity, a set temperature and pollutant free air. However, temperature is increased well beyond 23°C to accelerate the aging process.

According to the Arrhenius theory, a chemical reaction rate will increase with an increase in temperature. The basic calculation behind this commonly observed and accepted theory is that the chemical reaction rate doubles for every 10°C the temperature is above the normal operating temperature. Thus, if a printed document is stored at a typical office temperature of 23°C for one year, in an experiment to accelerate the aging process by a factor of two—which would shorten the exposure time to half a year—the temperature should be raised to 33°C.

In 2009, HP conducted a study to test the archival properties of HP 940 Officejet inks in combination with leading plain papers. Print samples were kept in a controlled environment at a high temperature, following ISO 18924, which is designed to accelerate color fading. Optical density of black, cyan, magenta and yellow color targets, as well as the rate of paper discoloration or yellowing were measured and tracked over multiple points in time. The results were then extrapolated to reflect the typical document storage temperature of 23°C.

Estimates for document failure points, or when an image is considered to first show signs of noticeable fade, were made using the Wilhelm Imaging Research, Inc., endpoint criteria “WIR Visually-Weighted Endpoint Criteria Set v3.0.” For details, visit www.wilhelm-research.com.

The following leading plain paper products were tested and are assumed to be a fair representation of standard quality plain papers available in the market.

Paper	Ink	Typical document storage archival rating
Domtar® Multi-system Ultra 20-lb.	HP 940 Officejet inks	>31 years
Boise® X-9™ 20-lb.	HP 940 Officejet inks	>46 years
Georgia-Pacific Premium Multi-Purpose Paper 20-lb.	HP 940 Officejet inks	>36 years
Steinbeis Vision Classic White 80 gsm	HP 940 Officejet inks	>41 years
Asia Pulp & Paper Paperline Gold 80 gsm	HP 940 Officejet inks	>42 years
JK Copier 75 gsm	HP 940 Officejet inks	>48 years
HP Multipurpose Paper 20-lb. with ColorLok	HP 940 Officejet inks	>34 years
Rey Office Document 80 gsm with ColorLok	HP 940 Officejet inks	>36 years
Mondi IQ with ColorLok	HP 940 Officejet inks	>29 years