

Digital Temperature Chart

In the first heat tolerance test assorted printers and substrates were checked for heat tolerances, in this test assorted digital photo and inkjet papers were used to determine heat tolerances of images from a single standard HP 960c inkjet printer. It was subjected to normal dry mounting at both mounting and laminating times and temperatures. Tests were conducted using a Seal 210M-X mechanical press at temperatures of 150°F, 170°F, 185°F, 200°F, and the laminating temperature of 225°F for 1, 3 and 5 minutes as indicated. Specific problems are noted. The test was designed to help determine the acceptability of heat when mounting digital photographs as opposed to other available cold mounting methods.

Paper	Notes	Time	66°C	77°C	85°C	93°C	Laminate	104°C
			150°F	170°F	185°F	200°F		225°F
HP Premium Plus Photo Paper		1 min	yes	yes	yes	yes		
HP Premium Plus Photo Paper		5 min					perforated	yes
HP Premium Photo Paper	Hot Press overlay foil sticks to inks	1 min	no	no	no	no		
HP Premium Photo Paper		5 min					perforated	yes
HP Photo quality Inkjet Paper Matte		1 min	yes	yes	yes	yes		
HP Photo quality Inkjet Paper Matte		5 min					not perf	yes
HP Photo quality Inkjet Paper Matte		3 min	yes	yes	yes	yes	not perf	yes
HP Photo quality Inkjet Paper Matte		5 min					not perf	yes
HP Photo quality Inkjet Paper Matte	Tested at higher temp, no laminate	5 min					no laminate	yes
HP Brochure and Flier Paper Matte		1 min	yes	yes	yes	yes		
HP Brochure and Flier Paper Matte		3 min	yes	yes	yes	yes		
HP Brochure and Flier Paper Matte		5 min					not perf	yes
Canon Glossy Photo Paper	Do not reposition laminate, inks peel off easily from paper base	1 min	yes	yes	yes	yes		
Canon Glossy Photo Paper		5 min					not perf	yes
Kodak Premium Picture Paper High Gloss	Release paper only, no Hot Press overlay foil	1 min	yes	yes	no	no		
Kodak Premium Picture Paper High Gloss	With Hot Press overlay foil	1 min	yes	yes	yes	yes		
Kodak Premium Picture Paper High Gloss	Temperature tested no laminate	5 min						no
Kodak Premium Picture Paper High Gloss	Release paper only, no Hot Press overlay foil	5 min					perforated	yes
Jetprint Photo Paper	All reacts to heat	1 min	no	no	no	no		no
Epson Photo Paper – Glossy	Orange peel in unprinted paper	1 min	yes	yes	yes	yes		
Epson Photo Paper – Glossy	Do not reposition laminate	5 min					not perf	yes
HP Multi Purpose Inkjet Paper		1 min	yes	yes	yes	yes		
HP Multi Purpose Inkjet Paper	Bleached out at highest temp	5 min					no laminate	no
HP Multi Purpose Inkjet Paper		5 min					not perf	yes

Though inconclusive at this point, it appears an image can be heat sensitive and not approved for dry mounting at the current average dry mounting temperatures of 170-185°F (77 - 85°C), yet still be approved for lamination at the higher 225°F (104°C) because of the vinyl coating. Many digital photos seem to tolerate the new low dry mounting temperature of 150°F available as a heat activated (HA) mounting board, though not all accept even this low temperature. Recommendations will continue to be cold mounting over heat mounting for digitals unless the source is known or a secondary image is available.

Laminating adhesives do not liquefy and clump inks as the toners do with electrophotographic color copies, so laminating is an option for all digitals tested. Since some ink and paper combinations are more nonporous than others it is still recommended to use perforated films in the event porosity might be an issue. Numerous digital photos were porous enough to use a nonperforated film.