Kao Collins Inc.

Endurance **TWK2010H** Kao Collins Inks for HP 45A Technology

Dark Image on Various Substrates
High Yield in Bulk

Endurance Black is a dye-based ink that was designed for bulk applications. It provides a dark image and high contrast throughout which can result in lower impression costs.

Ink Features

- Fluid base: Aqueous
- Colorant: Dye
- Flash Point $> 70^oC$
- Shipping info: Non-Hazardous

Recommended Printer Settings

Pen driver voltage:	10.2 V
Fire pulse length:	2.2 μs
Pulse warming:	40^oC

Printhead Performance

Decap time:	> 1 hr
Shelf life (single/bulk)	2 yr/6 mo
Bulk Cartridge Throughput[1]	>600 mL

Cartridge Maintenance & Handling

- Use a water dampened lint-free cloth to clean the print head
- Wipe slowly and lightly across tip of the long edge with the print head facing down
- Forcing the wipe (too much pressure) may scratch the print head
- Use of a cloth with lint may clog the nozzles
- DO NOT SHAKE CARTRIDGES: shaking a cartridge can create foam and the entrained bubbles may cause printing failure

Cartridge Storage

- Operating conditions: $10 - 40^oC$
- Storage conditions: $10 - 30^oC$
- Less than 1 day down: leave cartridges in the machine and wipe/purge before next use
- More than 1 day down: remove cartridges from machine and place cartridge clip (available from Kao Collins) over the head, wipe and purge before use

Substrate Performance • 600x300 DPI • Dryer: OFF • Rating: 1–5 (5=Best)

Disclaimer: The information presented in this data sheet is intended only as a guide and does not infer a warranty of performance. Results may vary depending upon many variables including the specific grade of substrate, environmental conditions, print speed, etc.

Sample Substrate	Copy Paper	70# Gloss	Matte	Chipboard	Clay Coat Box
Optical Density	1.04	1.13	1.05	.93	.92
Unassisted Dry Time	1 sec	2 sec	1 sec	1 sec	1 sec
Wet Rub Resistance	5	4	5	5	5

Note:

[1]Throughput before nozzle failure will vary based on application parameters; e.g., DPI, Nozzles Used, Duty Cycle, & Print Speed