

HP TIJ 2.5 Industrial Ink Selection Guide



Progressive Profitable Printing



Versatile and affordable, HP's advanced inkjet technology powers a wide range of industrial and commercial printing applications—from simple text documents to vivid, complex graphics on all types and sizes of media. HP Thermal Inkjet Technology (TIJ) drives the performance of HP print cartridges, from the printhead technology to the Original HP ink formulations. The result is high-resolution printing (up to 600 dpi) for sharp text, crisp barcodes, and vivid color graphics.

Whether your goal is to create eye-catching direct mail or high-resolution barcodes, text or graphics, HP's wide variety of ink supplies—including monochrome and color, pigment- and dye-based, and standard and fast drying inks in a wide range of form factors—offers the right solution for your business.

Why choose Original HP industrial inks?

HP invented thermal inkjet printing. For more than 25 years, HP engineers have studied ink and media interaction and applied their knowledge to create a line of high-performance inks customized to a wide variety of industrial and commercial applications.

By choosing Original HP industrial inks, you get the power of one of the strongest ink development programs in the world and the quality and reliability of HP supplies.

TIJ 2.5 at a glance

- Up to 600 dpi resolution
- 300 nozzles
- Print width of 0.5 inch
- Speeds up to 400 feet per minute

Pigment-based inks

- Large, solid-color pigment particles suspended in liquid by a dispersant
- Provide excellent fade resistance and water resistance

Dye-based inks

- Small color molecules dissolved in a liquid
- Deliver a bright, wide color gamut

Proven benefits

High performance

Maintain high quality and high productivity with high-performance Original HP inks. HP's spectrum of TIJ 2.5 inks supports a wide variety of applications and substrates. Each ink accentuates certain performance characteristics such as substrate coverage, fast drying time, or long decap time.

Consistent and reliable

Every Original HP inkjet print cartridge must meet strict quality standards. All HP inks are subject to a battery of tests to prevent problems that may degrade image quality such as microscopic contaminants that can clog printhead nozzles. Count on consistent printing performance and reliable results.

Cost effective

Save time, improve productivity, and lower operating costs. Self contained, customer-replaceable Original HP print cartridges nearly eliminate time-consuming and routine maintenance, enable a quick change from black to color printing, and deliver a fresh printhead with each cartridge replacement. Proven HP Thermal Inkjet Technology enables low-cost, efficient ink usage.

Substrate Compatibility for Popular HP Black Inks

Ink Characteristics

| | 45A/4500 | Versatile Black | Fast Dry Black | 1918 | Durable Black |
|-----------------|----------|-----------------|----------------|--------|---------------|
| Ink type | Pigment | Pigment | Pigment | Dye | Pigment |
| Optical density | Good | Best | Best | Good | Good |
| Decap | Good | Good | Good | Best | Better |
| Dry time | Good | Best | Best | Better | Best |

Substrate Compatibility













| | | | | | |
|-----------------|---|---|---|---|---|
| Uncoated | + | + | + | + | + |
| Matte coated | ~ | + | ~ | ~ | + |
| Gloss coated | ~ | + | ~ | ~ | + |
| Overprinted | ~ | + | ~ | - | ~ |
| Aqueous coating | - | ~ | - | - | + |
| Varnish coating | - | + | - | - | + |
| UV coating | - | - | - | - | - |
| DuPont™ Tyvek® | ~ | + | + | - | - |
| PVC | - | ~ | - | - | - |

- ⊕ Recommended ink/substrate combination
- ~ Recommended for some substrates in the category
- ⊖ Not a recommended ink/substrate combination

Evaluation notes:

- Ratings show ranking of HP black inks in the HP TIJ 2.5 industrial ink portfolio
- Optical density rankings based on measurements taken on uncoated bond media
- Ink performance may vary based on media, printing system, and environmental conditions. Test the ink in your application to understand true performance.

To help you select the ideal match for your needs, this chart provides a comparison of inks across the HP industrial ink portfolio. Whether you're looking for the fade- and water-resistant output delivered by pigment-based inks or the bright color and wide gamut characteristics of dye-based inks, HP has the solution.¹

| Product name | Description | Type | Product numbers | | | |
|---|---|----------|----------------------|-----------------|---------------------|--------|
| | | | Integrated printhead | Bulk ink supply | Printhead, bulk ink | |
| | | | 40/42 ml | 370 ml | Printhead | 350 ml |
|  HP 4500 Black Ink | Sharp, crisp print quality with minimal intervention, on primarily uncoated media <ul style="list-style-type: none"> High quality, sharp, crisp output Excellent barcode readability Fade and water resistance on a variety of media | P | 51645A | C6119A | Q7456A | Q7457A |
|  HP 45A 10-Pack | Simplified bulk packaging of the HP 4500 Black Ink can reduce shipping costs as well as handling and waste <ul style="list-style-type: none"> High quality, sharp, crisp output Excellent barcode readability Fade and water resistance on a variety of media | P | CG339A | | | |
|  Versatile Black Ink | High-speed printing with high optical density and fast dry time on a wide variety of media <ul style="list-style-type: none"> Sharp, dark black text with high optical density in a single pass Fast dry time and high durability, designed for minimum smearing or transfer Print on both coated and uncoated media without changing ink | P | C8842A | | Q2320A | Q2321A |
|  Fast Dry Black Ink | High-speed printing with high optical density and fast dry time with minimal intervention <ul style="list-style-type: none"> Fast dry time enables high-quality, high-speed printing Sharp, dark black text with high optical density in a single pass Fade and water resistance on a variety of media | P | C6195A | | | |
|  HP 1918 Black Ink | Long decap time for intermittent printing on uncoated and some coated media <ul style="list-style-type: none"> Long decap time enables immediate startup and virtually no printhead servicing between intermittent prints Sharp, crisp output Durable output, designed for minimum smearing or transfer | D | Q2344A | | | |
|  Durable Black Ink | Durability, decap, and print quality performance at mid-range print speeds <ul style="list-style-type: none"> Substrate variety, including coated, aqueous overcoated, and varnished media Versatility up to 100 ft/min print speeds Durable black ink with very good optical density up to 600 x 600 dpi | P | CQ849A | | | |
|  Spot Color Red Ink | High-speed, high-quality printing with enhanced eye appeal <ul style="list-style-type: none"> Dye-based inks produce bright, eye-catching color Faster dry time enables higher production rates and faster printing on uncoated media Effective personalization of mailings and direct marketing messages with color text and graphics | D | C6168A | | | |
|  Red Ink | Ideal for applications requiring a more water-resistant red ink on uncoated media <ul style="list-style-type: none"> Pigment-based ink produces more water-resistant prints High-quality printing on a variety of uncoated media | P | C6128A | | Q2357A | Q2358A |
|  Spot Color Blue Ink | High-speed, high-quality printing with enhanced eye appeal <ul style="list-style-type: none"> Dye-based inks produce bright, eye-catching color Faster dry time enables higher production rates and faster printing on uncoated media Effective personalization of mailings and direct marketing messages with color text and graphics | D | C6170A | | | |
|  Blue 2242 Ink | Ideal for applications requiring a more water-resistant blue ink on uncoated media <ul style="list-style-type: none"> Pigment-based ink produces more water-resistant prints High-quality printing on a variety of uncoated media | P | Q2354A | | Q2382A | Q2356A |
|  Spot Color Green Ink | High-speed, high-quality printing with enhanced eye appeal <ul style="list-style-type: none"> Dye-based inks produce bright, eye-catching color Faster dry time enables higher production rates and faster printing on uncoated media Effective personalization of mailings and direct marketing messages with color text and graphics | D | C6169A | | | |
|  Spot Color Yellow Ink | High-speed, high-quality printing with enhanced eye appeal <ul style="list-style-type: none"> Dye-based inks produce bright, eye-catching color Faster dry time enables higher production rates and faster printing on uncoated media Effective personalization of mailings and direct marketing messages with color text and graphics | D | C6173A | | | |

P = Pigment **D** = Dye

¹ Print quality and durability performance characteristics of pigment and dye-based inks as compared across the HP industrial ink portfolio. In some cases, fade- and water-resistance testing by HP Image Permanence Lab. Ink performance may vary based on media, printing system, and environmental conditions. Test the ink in your application to understand true performance.

To learn more about HP inks and custom supplies,
visit www.hp.com/go/industrial_ink

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