

Well - Life Trading Co.

華利貿易行

Unit 09~10, 20/F., Horizon East,
No.1 Tsai Po Street, San Po Kong,
Kowloon, Hong Kong.

E-mail: wlf@well-life-trading.com.hk

Tel : (852) 2793 1622
Fax: (852) 2793 2572

DuPont™ TYVEK® Graphic & Printing Process Reference Guidelines



DuPont™ Tyvek® is a popular printing substrate due to its light weight, smooth surface, high dimensional stability, opacity, toughness and durability. Uncoated Tyvek® can be printed using most digital and commercial printing processes. Some digital presses and some aqueous ink jet printers require a special coating. Tyvek® can be printed either sheet or web-fed. Tyvek® can be printed the same way as paper, although some of its physical properties do require special attention. To achieve excellent print quality, both the designer and printer must understand the unique properties and characteristics of Tyvek®.

Tyvek® is made of continuous high-density polyethylene filaments. By using heat and pressure, these filaments are bonded into a base material for printing which turns out to be neither paper, cloth nor plastic film, but it integrates the advantages of those three materials.

Tyvek® material has a melting point of 135°C and is a water-resistant and non-absorbent material with superior dimensional stability, high strength, and a smooth matt surface. Most traditional printing technologies can be used for Tyvek® printing, as well as some digital printing. The following Tyvek® printing quick reference guidelines have been summarized based on our current knowledge and the relevant contents will be updated continuously.

What printing technologies are suitable for Tyvek® printing?

1. Traditional printing

Printing methods	Tyvek® 10 series	Tyvek® 14 series
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Offset Lithographic Printing	- Traditional sheet-fed offset printing	Suitable	Suitable
	- UV sheet-fed offset printing		
	- UV web-fed offset printing		
Flexographic Printing	- Water-based	Suitable	Suitable
	- Solvent		
	- UV		
Rotogravure Printing	- Water-based	Suitable	Suitable
	- Solvent		
	- UV		
Screen printing		Suitable	Suitable

2. Digital printing

With the growing demand for personalized and short lead time for orders, digital printing is used more frequently for the printing of Tyvek® brand materials, especially for the HP Indigo machine. Since the fusing temperatures of laser printers commonly seen on the market are much higher than the melting point of Tyvek®, they are not suitable for Tyvek® printing. However, the ProC7100X, 9100X machines of the Ricoh series have already been demonstrated for Tyvek® printing (such as the printing of Tyvek® 1082D certificates) because their fixing temperatures can be adjusted to suit Tyvek® materials.

Printing methods		Tyvek® 10 series	Tyvek® 14 series
HP Indigo	- Sheet-fed	- Suitable	- Unsuitable
	- Web-fed	- Suitable (refer to next table)	- Suitable (refer to next table)
Laser printing	- Conventional	- Unsuitable	- Unsuitable
	- Ricoh Pro C7100X and C9100X series	- Frequently used on 1082D but was not subject of authenticated tests of the equipment	- Unsuitable
Narrow web-fed label	- Water-based ink-jet printing	- Unsuitable	- Unsuitable

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printing machine	- UV/LED ink-jet printing	- Frequently used but was not subject of authenticated tests of the equipment	- Not used
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HP Indigo suitability

Tyvek® Styles	HP Indigo web-fed (roll to roll)			HP Indigo sheet-fed (only for one-shot technology)	
	20000 HP	WS6xx0	WS4xx0	Indigo 7xxx	HP Indigo 5xxx
1025D	Not tested	Certified	Certified	Failed authentication	
1057D	Not tested	Certified	Certified	Not certified but frequently used for racing numbers	
1058D	Not tested	Certified	Certified	Not tested	Not tested
8740DL	Not tested	Certified	Certified	Certified	Certified
1073D	Not tested	Certified	Certified	Certified	Certified
1082D	Profiled	Certified	Certified	Certified	Certified
4158D	Not tested	Certified	Certified	Not tested	Not tested
4173D	Not tested	Certified	Not tested	Certified	Certified
1442R	Profiled	Profiled	Not tested	Unsuitable	
1473R	Not tested	Not tested	Not tested	Unsuitable	

Note : 'failed authentication' means that the authentication test was conducted but didn't meet the evaluation requirements for testing result, which was likely due to the specifications of the materials exceeding the limits of the equipment.

3. Wide-format ink-jet printing

HP Latex 3rd generation, Canon CrystalPoint™/UVgel, and most UV/Inkjet presses are suitable for direct printing on Tyvek®. Water-based, solvent, and eco-solvent ink jet presses do not print with acceptable quality on Tyvek®.

Wide-format ink-jet printer	Tyvek®
Water-based ink-jet printer	Unsuitable (see note)
(Eco) solvent ink-jet printer	Unsuitable (see note)

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UV/LED ink-jet printer		Suitable
HP Latex inkjet printer	3rd Generation ink	Suitable. Refer to next table
Canon Colorwave	CrystalPoint™	Suitable
Canon Colorado M series	UVgel	Suitable

Note: if water-based ink-jet coating or (slightly) solvent ink-jet coating is pre-coated on the surface of Tyvek® materials, it is feasible to directly print with water-based ink-jet printers or (slightly) solvent ink-jet printers.

HP Latex suitability

Tyvek® style	300 and 500 series	1500 and 3000 series
1025D	Certified	Profiled
1057D	Certified	Profiled
1058D	Certified	Profiled
1073D	Certified	Profiled
1082D	Certified	Profiled
1442R	Unsuitable	Unsuitable
1473R	Unsuitable	Unsuitable

For certification information, visit the website <http://www.hp.com/go/mediasolutionslocator> and search 'DuPont' in the HP PrintOS Media Locator. If you need more information, pls contact with us more information.

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