

The background of the advertisement is a vibrant green. It features a large, detailed illustration of a monarch butterfly with its wings spread, positioned on the right side. The butterfly's wings are dark with characteristic white spots and markings. The overall aesthetic is clean and modern, emphasizing a 'greener' theme.

TORAY

Innovation by Chemistry

An Inherently Simpler, Superior, Greener Printing

TORAY WATERLESS PLATES

Introducing the waterless printing plates from Toray. Providing innovative solutions while using fewer natural resources is the hallmark of Toray technologies. Toray waterless plates can set you apart from your competitors.

®

What is Waterless Printing?

An Inherently Simpler, Superior, Greener Printing

Conventional “wet” offset printing requires two ink and water balance—ink and dampening solution to reproduce an image on press. However, managing two different fluids in the printing press is by default a more complex process, making the press operator's job much more difficult.

Waterless printing is an alternative printing system that runs on standard offset presses. The key to waterless printing is a plate that uses an ink-resistant silicone coating to eliminate the need for dampening solution.

Conventional "Wet" Printing

Dampening solution (shown in blue, below left) is used to repel ink (in magenta). As the result, tainted water is discharged from the press.



Waterless Printing

Silicon polymer (in green) is used to repel ink. The mixture of water, alcohol or alcohol substitute and etching fluid are not required in the printing process.



By eliminating the dampening solution from the printing process, the waterless printing system provides improvements in productivity, quality, and an environmentally-friendlier operation.



Environmental Benefits

There are four key environmental benefits of waterless printing:

- Water sustainability—an increasingly pressing need everywhere
- No tainted water discharge—no fountain solution, no waste water management
- Reduced solution and chemical in plate processing—minimized VOCs
- Sound ecology beyond FSC, ISO or wind power

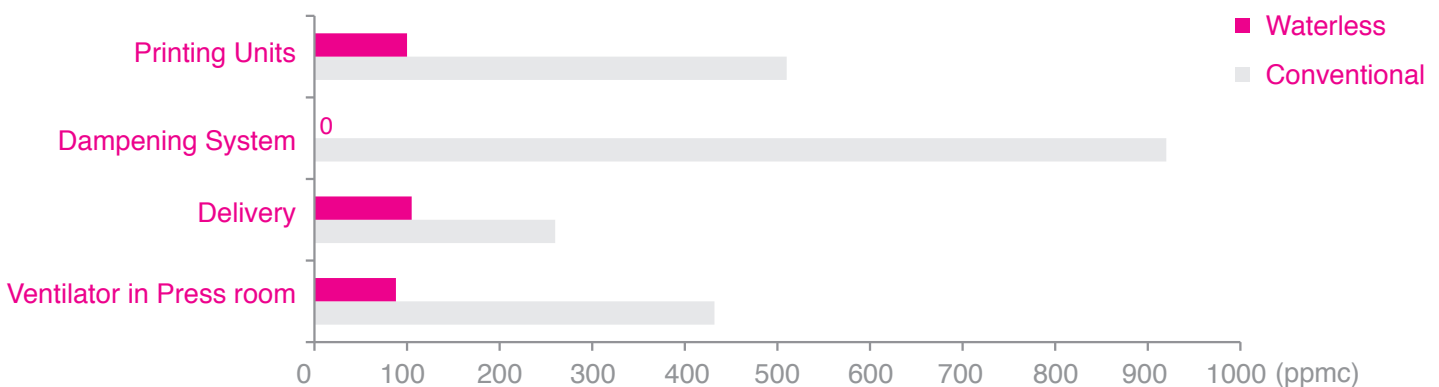
Pre-press

Materials	Conventional	Waterless
Developing Solution		
Waste Liquid		

Press

Materials	Conventional	Waterless
Etching Liquid & IPA		
Waste Liquid		

60-80% of VOC Reduction



*Source: Bureau of Environment. Tokyo

'TORAY'

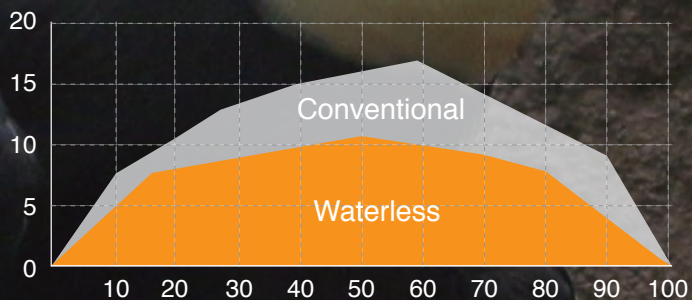
Innovation by Chemistry

Optimum Quality

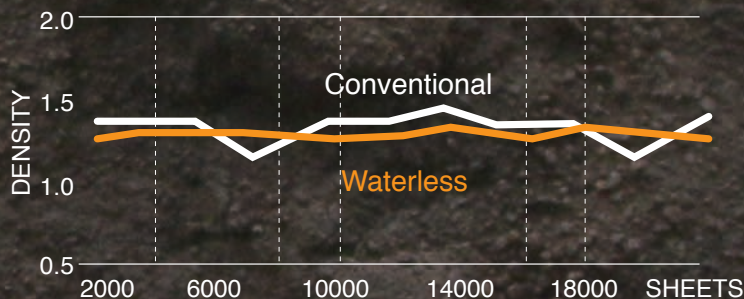
Toray waterless plates offer sharper dots, higher resolution and wider color space than conventional offset plates.

- Reduced dot gain
- Highest-resolution, lenticular, and FM 20 stochastic screened work
- A wider color space with richer and bolder colors
- Uniform print and color quality
- Superior registration and ink holdout
- Elimination of fan out and paper stretch from fountain solution when printing lightweight stocks or perfecting

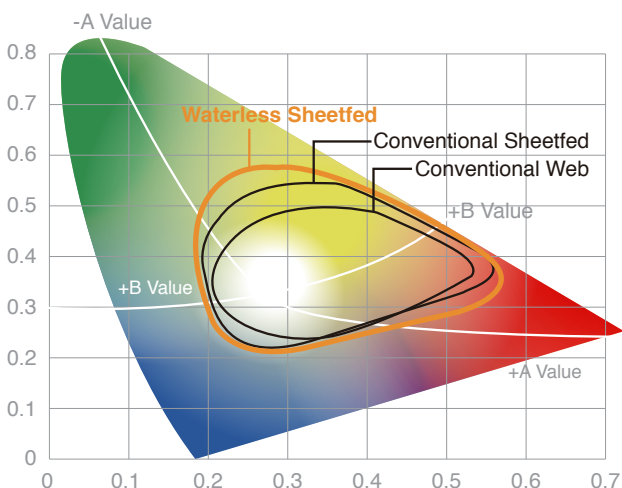
Reduced Dot Gain



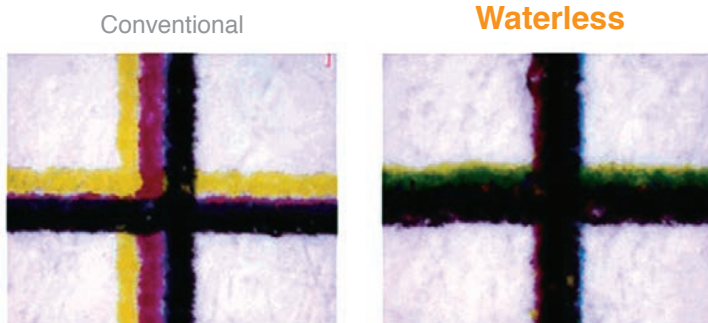
Consistent Ink Density



Wider Color Space



Superior registration



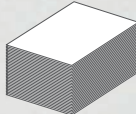
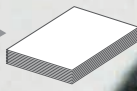
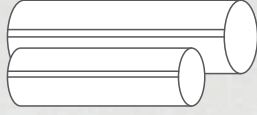

Printed on the lightweight stock by perfecting machine.





Increased Productivity

Adopting Toray waterless plates can result in significant improvement in productivity. Eliminating dampening solution from printing process allow cost reduction, faster setup, easier control and better consistency that result in uniform print and color quality.

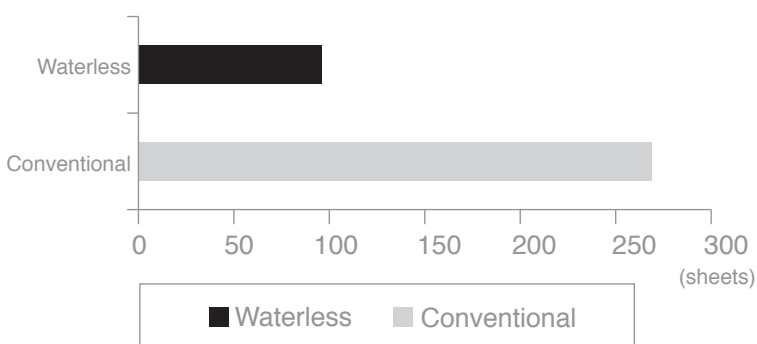
- Cost reduction with no fountain solution, waste water and dampening rollers management
- Faster make-ready time with reduced waste
- Shorter time to achieve and maintain stability during start-up
- Better solid ink density yielding less color variations throughout the run
- Superior registration for reduced production time
- Easy adaptation with existing skill set and workflow

Cost Reduction in Press

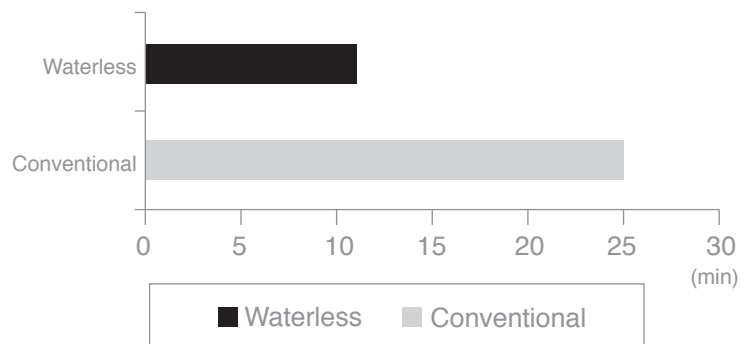
Materials	Conventional	Waterless
Waste Paper		
Dampening Rollers		

Materials	Conventional	Waterless
Etching Liquid & IPA		
Waste Liquid		

Paper Waste



Make-ready Time



*Sourced by: Journal of Printing Science and Technology in Japan

<http://www.toraywaterless.com/>

Guide to Toray Products

Toray Waterless CTP Plates

Toray waterless plates are negative working, non-ablative, thermal plates that utilize traditional printing presses equipped with ink temperature control systems to effectively print on paper, plastics and other substrates without dampening solutions. Toray waterless plates will produce high-resolution images with 830 nm thermal CTP devices from all major manufacturers enabling printers to reach new heights in quality.



TAC –VG5

Type	Standard CTP waterless plate for sheetfed, web printing
Resolution	300 lpi* *Dependent upon condition of image devise & processing
FM Screening	20 micron* *Dependent upon condition of image devise & processing
Sensitivity	120-150 mJ/cm ²
Exposure	830 nm Thermal CTP; Non ablative, negative working
Run length	125,000+* *Dependent upon image resolution, press, press chemical, ink and paper conditions
Inks	Compatible with oil based & UV based inks without baking
Thickness	0.15mm, 0.24 mm & 0.30mm (.006", .009" & .012")
Handling	Room Light
Processors	Toray TWL Waterless processors and comparable waterless processors from other manufacturers

*For other type of plates, please contact us.

Processors

Toray and Toray approved automatic plate processors with low-maintenance design use up to 80% less chemicals and wash water than traditional "wet" lithographic plate processors. Since chemicals such as high alkaline developers, acidic finishers and replenishing solutions are not needed, Toray waterless system will help reduce your pre-press cost and inventory low.

Toray Waterless plate automatic developing machine series

Series		TWL1160F2	TWL650F
Plate size	Max width	1160 mm	620 mm
	Min length	350 mm	300 mm
	Plate thickness	0.15 - 0.3mm (.006" - .012")	
External dimensions	Width	1690 mm	1090 mm
	Depth	2500 mm	2000 mm
	Height	1030 mm	920 mm
Weight		910 kg	350 kg



<http://www.toraywaterless.com/>