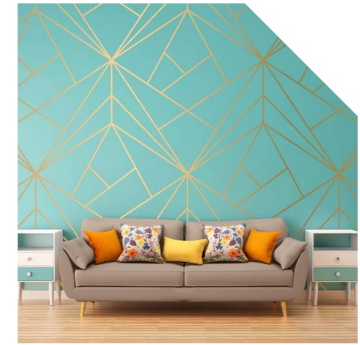


# BREAKING ALL THE RULES WITH UVgel TECHNOLOGY

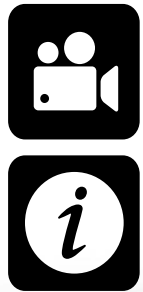


The Océ Colorado® 1640 Application Guide  
May 2018

**Canon**

# BREAKING ALL THE RULES WITH UVgel TECHNOLOGY

With the new Canon UVgel technology comes a breakthrough in wide format printing. UVgel ink combines the strengths and benefits of all the current ink technologies such as EcoSolvent, Latex, and traditional UV. At the same time, it eliminates and compensates for much of their typical limitations.



A wide colour gamut, comparable to that of EcoSolvent inkjet printers

Output is immediately dry and ready to be processed. Can be laminated the minute it comes off the machine

With the speed & productivity of traditional high-end liquid UV systems, responding to the call for shorter and shorter lead times

Satisfy the highest environmental standards for indoor usage with a virtually odourless profile

Prints that have a thin layer of ink and a smooth finish; without the traditional UV texture thus, enabling easy lamination

Ink that is bendable and flexible compared to traditional UV and, at the same time, offering a very high scratch resistance

Excellent light-fastness making UVgel very suitable for outdoor applications

UVgel uses a low temperature printing process opening up a wider variety of media

# OCÉ COLORADO 1640: REVOLUTIONIZING ROLL-TO-ROLL APPLICATIONS

The Océ Colorado 1640 is excellent for both indoor and outdoor applications. It delivers a large colour gamut, similar to solvent inks, but combines this with the environmental benefits and safety profile of latex and UV-cured systems. Our advanced monitored media handling system and absolute dot gain control make for consistent high quality and accurate prints, while the low heat levels inherent to UV technology opens the doors to a much wider range of media capabilities.

This applications guide demonstrates the array of possibilities with Canon's ground-breaking UVgel technology.

- 2** | Wall decoration
- 3** | Short-term POP
- 4** | Long-term POP
- 5** | Outdoor & Event Banners
- 6** | Indoor Film & Roll-up Banners
- 7** | Backlits (Light Boxes)
- 8** | Soft Signage
- 9** | Fine Art - Canvas Prints

- 10** | Fleet & Car Graphics
- 11** | Floor Graphics
- 12** | Perforated Film



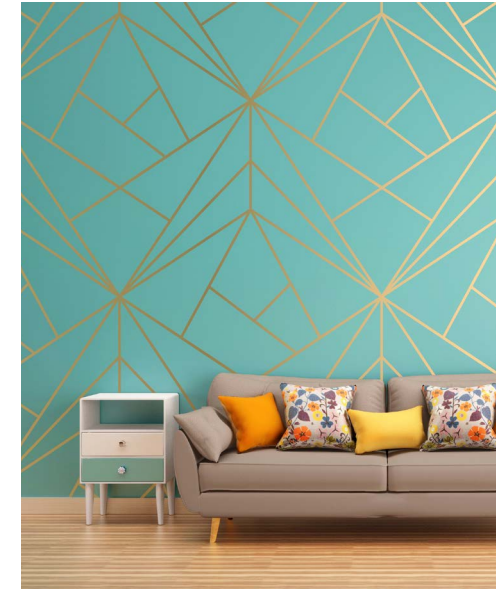
# WALL DECORATION

MARKETS: Individual consumers, Décor and Interior design, Retail sectors, Offices and Showrooms

Wall covering and decoration is a huge, promising market that has been based on a completely analogue production process for a long time. But it is now slowly but surely turning digital.

Various media and techniques are used:

- Wall paper: the traditional paper roll, often with a texture, that later is glued to the wall/object. Pre-glued papers are also on the market
- Wall coverings: a textured synthetic media, with or without a self-adhesive layer and backing liner



## MEDIA TYPES:

- The most common type used in today's market is a textured, self-adhesive vinyl

## ADVANTAGES OF UVgel:

- Colour consistency: UVgel is a very colour-consistent digital printing process due to absolute dot gain control. Not only consistent within the same print run, but over a longer time period, due to the industrial-built, high quality piezo-electric printheads in combination with UVgel ink
- Geometric & size consistency: due to the low temperature of the printing process, no stretching or deformation occurs, enabling consistent output every time, even on the longest panels
- Odourless printed output with key environmental certifications
- High scratch resistance and high washability
- The Océ Colorado's media handling system uses an optical feedback loop that continuously monitors the media advance, creating highly accurate and stable long prints

## CONSIDERATIONS:

- Certain porous or absorbent media cannot be used with the current UVgel technology

## APPLICATION ATTRIBUTES

Visual Quality:



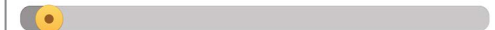
Durability:



Lifespan:



Productivity Mode:



Turnaround:



Run Length:



# SHORT-TERM POP

MARKETS: Retail sector



Disposable POP are short-term prints focused on selling products in a retail environment. They have a lifespan of 1-7 days and feature special prices, promotions, or discounts. The key objective of disposable POP is to influence buying behaviour, therefore print quality and attractive visuals are vital. To be effective, the prints are typically installed inside or near the retail space and are often displayed in frames.

## APPLICATION ATTRIBUTES

Visual Quality:



Durability:



Lifespan:



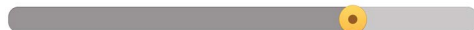
Productivity Mode:



Turnaround:



Run Length:



## MEDIA TYPES:

- The most commonly used media are (poster) paper, self-adhesive vinyl and self-adhesive paper

## ADVANTAGES OF UVgel:

- Wider colour gamut at higher speeds: crucial for promotional advertising and brand colours
- More productive printing speeds in high output quality, enabling short lead-times
- Odourless prints, with certification, immediately ready for indoor use
- The printed output is highly scratch resistant, not requiring lamination
- Very limited dot gain = media does not require expensive coating and still have vibrant, punchy colours and sharp image quality. A generic inkjet coating is sufficient
- Low temperature printing process = wider and more cost effective variety of media. Cheaper poster papers tend to deform with heat, making it impossible to print on a heat based printing system. Cheaper self-adhesives are known to curl up after being exposed to heat making mounting difficult

## CONSIDERATIONS:

- Black liner/background or full transparent film cannot be detected by the machine

# LONG-TERM POP

MARKETS: Retail sector

This is a common application serving a large market for both indoor and outdoor advertising, branding, and display purposes. The lifetime typically ranges from one to six months. Lamination is also often done for additional mechanical protection. This application is often used to build brand identity.



## MEDIA TYPES:

- The media used for this application are (poster) papers, self-adhesive vinyls & synthetic films

## ADVANTAGES OF UVgel:

- UVgel has the wide colour gamut and high colour accuracy of EcoSolvent inks but are additionally odourless and therefore better suited for indoors
- Because of the unique UVgel properties, the colour consistency is very good across different types of media, both within a print run, as well as over time
- UVgel is very scratch resistant and durable
- If despite this, lamination should still be preferred, UVgel allows for the simplest and cheapest lamination process to be used

## CONSIDERATIONS:

- Black liner/background or full transparent film cannot be detected by the machine

## APPLICATION ATTRIBUTES

Visual Quality:



Durability:



Lifespan:



Productivity Mode:



Turnaround:



Run Length:



# OUTDOOR & EVENT BANNERS



MARKETS: Retail sector, Event venues, Tradeshow, Traditional advertising

This is signage in the form of flexible banners for outdoor use and promotional advertising. Sometimes this application is also used indoors. The intended lifetime can range from one day (a single event), to several months (seasonal promotion) and even up to one or more years (permanent display).

## APPLICATION ATTRIBUTES

Visual Quality:



Durability:



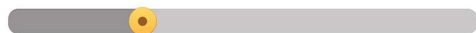
Lifespan:



Productivity Mode:



Turnaround:



Run Length:



## MEDIA TYPES:

- Vinyl
- PET
- Tyvek

## ADVANTAGES OF UVgel:

- UVgel offers the advantage of being a very fast printing process in combination with low temperature
- Cheaper media can be used. Where other technologies often suffer from wrinkling and deformation when being printed at high speed and exposed to high temperatures, not UVgel technology!
- UVgel has also the wide colour gamut of EcoSolvent inks but unlike EcoSolvent it is also odourless and thus enables indoor usage
- For outdoor use, UVgel has the advantage of excellent light-fastness as well as having a very high scratch resistance combining to provide excellent overall outdoor durability

# INDOOR FILM & ROLL-UP BANNERS

MARKETS: Retail sector, Event venues, Tradeshow

Indoor banners have a lifespan of up to one year and mainly feature promotional messages. Used in hang-up, pop-up, or roll-up banner stands, these prints need to be durable and are typically printed on thermoplastic film.



## MEDIA TYPES:

- The media used is a cost-effective plastic film, most often Polypropylene and PVC

## ADVANTAGES OF UVgel:

- UVgel has no problem printing on most flexible synthetic films and results in a printed output that is both good in image quality, as well as keeping the printed output flat
- Heat-based printing systems such as EcoSolvent or Latex often have the undesired effect that the film starts 'cupping' after the film leaves the printer, even when the material is not thermoplastic. None of this occurs with UVgel technology
- On top of that UVgel allows the choice for more cost effective, thermoplastic media

## APPLICATION ATTRIBUTES

Visual Quality:



Durability:



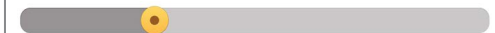
Lifespan:



Productivity Mode:



Turnaround:



Run Length:





# BACKLIT ADVERTISING



MARKETS: Retail locations, Shopping malls, Public transportation

This is an interesting application as this is typically sold at higher margins, but it has some special requirements. To print backlit applications, a lot of ink is required on the media in order to block out the light in darker areas and to have fully saturated colours.

## APPLICATION ATTRIBUTES

Visual Quality:



Durability:



Lifespan:



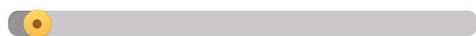
Productivity Mode:



Turnaround:



Run Length:



## MEDIA TYPES:

- The media used is mostly translucent polyester or acrylic film. For wide format light boxes backlit banner is used

## ADVANTAGES OF UVgel:

- UVgel allows a lot of ink to be deposited on the media without the need for intermediate curing or drying of the ink (as opposed to liquid ink, where drying or curing needs to happen while the ink is being printed)
- The result is that UVgel can print backlit applications at a printing speed that is multiple times faster than conventional ink systems
- An additional advantage is the low temperature of the UVgel printing process opening up a wider variety of cost effective, thermoplastic media

# SOFT SIGNAGE

MARKETS: Retail sector, Event venues, Tradeshow

Fabrics are used to create lightweight, flexible advertising panels and displays. They are often preferred over standard self-adhesive panels, posters or displays because of the easy handling and more luxurious perception. A second use of soft signage is interior decoration.

For a large part of the market, printing on fabric is done with a dye-sublimation process: this requires special printing machines with special dye inks, in combination with a separate transfer and sublimation process. These printers are single purpose machines. UVgel does not intend to offer a replacement solution for dye-sublimation printers, but rather to offer the ability to print on a limited number of textiles.



## MEDIA TYPES:

- The media used for this are mostly synthetic (polyester) fabrics

## ADVANTAGES OF UVgel:

- The advantage of UVgel is that images will turn out with dense, vibrant colours, and the printed output is odourless and suited for indoor use

## CONSIDERATIONS:

- For open knit fabrics, the option with a backing liner is to be used
- The fabric needs to have certain rigidity for the machine to be handled
- A critical aspect is the absorbance of the ink into the fabric and the curing level that can be obtained: full curing is a safety requirement. In general it can be stated that coated fabrics are more likely to pass this curing test than absorbent, thicker media

## APPLICATION ATTRIBUTES

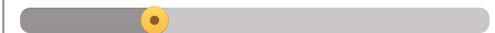
Visual Quality:



Durability:



Lifespan:



Productivity Mode:



Turnaround:



Run Length:





MARKETS: Individual consumers, Portrait studios, Décor and Interior design

Fine art applications are typically photographic, graphic, or artistic prints on canvas or canvas-like material. They are meant for long-term (months to years) indoor use and are becoming a mainstream application.

## APPLICATION ATTRIBUTES

Visual Quality:



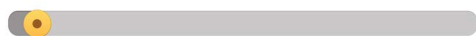
Durability:



Lifespan:



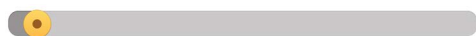
Productivity Mode:



Turnaround:



Run Length:



## MEDIA TYPES:

- The media used is usually a coated canvas or a canvas-looking textile or woven synthetic

## ADVANTAGES OF UVgel:

- UVgel allows for high quality prints at high speed. The inks are designed for indoor use, odourless, and come with the relevant certifications
- Apart from the higher achievable speeds at high quality the Océ Colorado 1640 offer a wide colour gamut, excellent colour accuracy and colour consistency

# FLEET & CAR GRAPHICS

MARKETS: Advertising, Businesses

This is the decoration and advertising on cars, vans and buses. The lifetime of the application is temporary (an advertising campaign on a bus) to semi-permanent (decoration of a van)



## MEDIA TYPES:

- The media used for this are self-adhesive vinyls

## ADVANTAGES OF UVgel:

- UVgel ink is perfectly suited to do vehicle graphics: the ink is bendable and flexible and can be applied to cover the curves and round edges of vehicles
- Because of its high scratch resistance, additional lamination is not always necessary
- Should additional lamination be preferred, then the smooth and thin ink layer allows for an inexpensive and easy cold lamination process

## CONSIDERATIONS:

- There is a limit to the stretchability of the ink. When the ink is overstretched, crack lines will start to appear, making complex 3D wrapping (around the mirror of a car) a challenge
- Increasing the stretchability would mean compromising on scratch resistance

## APPLICATION ATTRIBUTES

Visual Quality:



Durability:



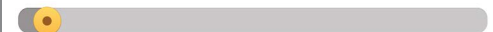
Lifespan:



Productivity Mode:



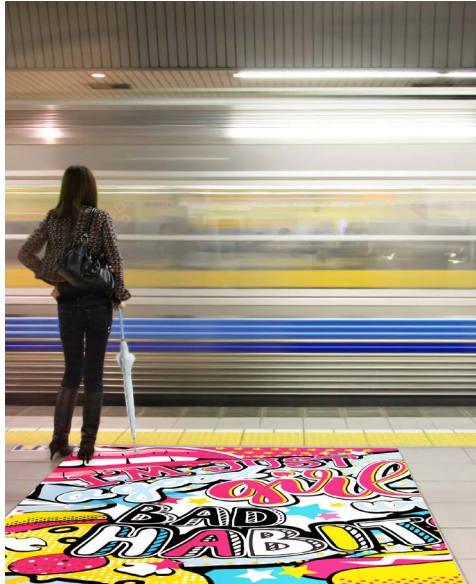
Turnaround:



Run Length:



# FLOOR GRAPHICS



MARKETS: Retail sector, Event venues, Tradeshows, Advertising

This is promotional advertising or signage on indoor flooring. The typical lifetime of this application can be very temporary or semi-permanent. Apart from the regular requirements for promotional advertising such as colour gamut and accuracy, the main requirement is mechanical toughness, scratch resistance is crucial. For example; in a shopping mall an industrial cleaning cart will go over the floor with dry and wet brushes several times a day.

## APPLICATION ATTRIBUTES

Visual Quality:



Durability:



Lifespan:



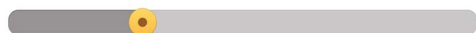
Productivity Mode:



Turnaround:



Run Length:



## MEDIA TYPES:

- Vinyl, textured vinyl, and self-adhesive vinyls

## ADVANTAGES OF UVgel:

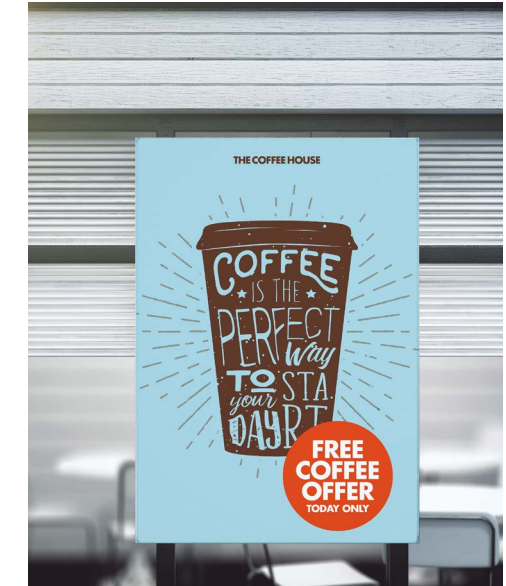
There are two ways of doing floor graphics:

1. Directly on a textured vinyl: this is done when the use is only temporary. UVgel is perfectly suited for this because of its excellent scratch resistance, unlaminated
2. Printed on a regular self-adhesive vinyl, and finished with a transparent overlamine: this is for the (semi) permanent floor graphics. Here UVgel has an advantage as well because of the fact that the printed output is immediately ready to laminate (unlike EcoSolvent which requires drying time). An additional advantage is that UVgel prints can be laminated in the easiest and most inexpensive way with a cold lamination process due to the smooth and thin ink layer.

# PERFORATED FILM

MARKETS: Retail sector

This is promotional advertising that is used to decorate glass surfaces and car windows. The perforated film with black backside allows you to look through it from the inside outwards, but at the same time displays the (printed) graphic if you are looking from the outside inwards. The typical lifetime of this application can be very temporary or semi-permanent



## MEDIA TYPES:

- The media used are perforated self-adhesive vinyl's, where the backside (the glued side) is black

## ADVANTAGES OF UVgel:

- The wide colour gamut of UVgel technology gives a clear advantage in reaching powerful, vibrant colours, which are a challenge since you only have “half of the print surface” to reach that colour (the other half being the perforated, empty hole)
- Because of its high scratch resistance, additional lamination is not always necessary
- Should additional lamination be preferred, then the smooth and thin ink layer allows for a cheap and easy cold lamination process
- Odourless printed output, with environmental certifications, so it can safely be used for indoor applications (dividing screens/indoor glass surfaces)

## APPLICATION ATTRIBUTES

Visual Quality:



Durability:



Lifespan:



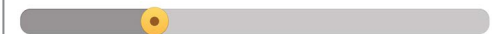
Productivity Mode:



Turnaround:



Run Length:



# THE NEW OCÉ COLORADO 1640

The first printer featuring Canon's ground-breaking UVgel technology



64" roll-to-roll

Outdoor banners  
1,710 ft<sup>2</sup>/hr

Indoor POP  
610 ft<sup>2</sup>/hr

2 inline rolls

Automated  
maintenance

## CANON CANADA INC.

Professional Printing Solutions Group (PPSG)

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PPSGInfo@canada.canon.com

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