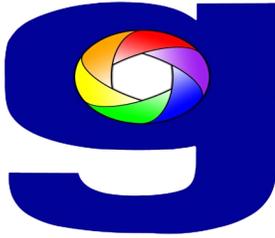


Introducing Colorado Imaging Solutions

by: **Canon**
CANON SOLUTIONS AMERICA



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Canon's UVgel Technology - Explained

The roll-to-roll printing market has seen significant changes in recent years, with the market expected to rise to 18.3 billion by 2025, according to a report from MarketsandMarkets.com. Currently worth around 7.2 billion, key market drivers continue to increase volumes of roll-to-roll printing across the globe, predicting the market to grow by 20.5%, from 2020 to 2025.

Market drivers

When looking at the roll-to-roll printing market as a whole, there are several market drivers significantly pushing it forward. These include: OLED lighting, smart labels, printed sensors and interior decoration.

Applications such as signs, banners and posters have also increased throughout recent years, with the COVID-19 pandemic rapidly increasing volumes of signage and floor graphics. New technologies, an expanding range of applications and more efficient workflow solutions are also playing a big part when analyzing the market's growth.

Market need

When analyzing the market need in the roll-to-roll printing market, we notice two undeniable trends: volumes are growing and pressure on turnaround times are rising. 60% of customers are now expecting large format printing jobs to be turned around within 24 hours, according to Key Point Intelligence Workplace.

In addition to this, customers are also increasing their printing volumes, with a bigger demand placed onto floor graphics and signage. Both trends are predicted to continue, with increased productivity a key driver for large format print service providers to invest in technology.

After addressing the drivers and needs within the roll-to-roll printing market, it seems there is a lack in devices available that can handle demands of higher and peak volume production.

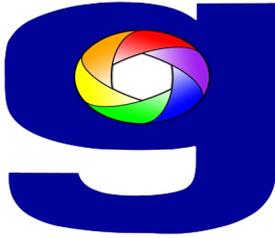
Canon has revolutionized the roll-to-roll market, with the introduction of their UVgel technology. This new technology strikes a unique balance between productivity, quality, and speed.

What is UVgel technology?

UVgel technology is a new and innovative process specially developed to combine excellent printing quality, high performance and fast drying time, all in one process. A breakthrough in printing performance, the UVgel technology eliminates any compromises you'd typically make when choosing from latex, eco-solvent, or conventional UV solutions.

How does it work?

Rather than printing with traditional inks, the technology heats UVgel inside the piezo-electric print-heads and turns the gel into a liquid. The controlled platen maintains the substrate at 28 degrees, irrespective of environmental factors. Once the gel has made contact with the media, it returns to its gel state and is 'pinned' to the media, assisted by a partial LED 'pre-cure' process. The image is then formed and gelled onto the media, with full LED curing then taking place.



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Why is it important?

The large format graphics market is rapidly changing, and consumers are now expecting faster turn-around times and increasing their volumes. These consumer changes remain key drivers for businesses investing in new technologies in order to solve current issues within their operations. Canon's new UVgel technology is the market leading solution for high productivity and efficiency, offering no compromises around quality and durability as a result.

The advantages

The UVgel process brings with it multiple productivity and quality benefits:

- The use of the gel rather than ink prevents any ink from merging, delivering high quality images and very precise dot gain.
- With a precise dot gain, ink can be deposited in fewer passes resulting in enhanced productivity, speed, and color accuracy.
- The gel produces low-odor prints, great for applications used indoors.
- The need for immediate curing is removed, meaning productivity is greatly increased.
- Prints are instantly dry, requiring no evaporative drying process.
- The prints are produced at a low temperature, using low energy.
- The prints are very robust, reducing the need for lamination.

How is UVgel different to traditional UV?

When printing with traditional UV, images are often left with an uneven surface, due to the different layers of ink curing at different times. UVgel technology however separates the printing and curing process, meaning that the UVgel has time to settle, creating a smooth, flat layer. This creates a high-quality finish that's perfectly suited for lamination, if required.

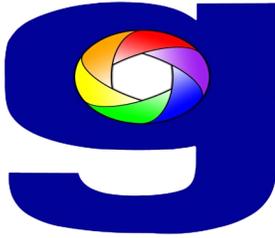
How does UVgel benefit your application versatility?

Low heat process

UVgel technology uses a low heat process, with UVgel ink drops deposited onto the substrate at 24-28 degrees. The technology uses LED-curing, meaning no heat is required for drying and prints are instantly dry when cured. UVgel technology is ideal for applications requiring high geometric accuracy such as wallcoverings and is well suited to lower-cost applications on inexpensive, thin media.

No water content

Compared with other technologies, UVgel doesn't contain any water, improving the dimensional consistency by eliminating the problems associated with the swelling of media. Due to its excellent interaction with a variety of substrates, including heat sensitive media, UVgel is inherently versatile for a wide range of indoor and outdoor applications.



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Durability

The finished LED-cured images are highly durable, making the UVgel technology suitable for outdoor work and applications. Its prints offer improved levels of outdoor UV light fastness, abrasion resistance and are easily washed, compared with other standard technology inks.

Flexibility

In combination with an exceptional mechanical and chemical resistance, the UVgel 460 inks are flexible and have great stretch for easy application and removal around curves and edges.

How does your UVgel benefit TCO?

With its high productivity and low ink consumption, UVgel technology enables the ability to print on thin, inexpensive media. Along with a high level of automation and reduced routine maintenance, an advantageous Total Cost of Ownership can be achieved.

Environmental impact and sustainability

Canon's UVgel technology proudly demonstrates its positive environmental impact and sustainability in three ways: The impact of the end product, its impact whilst in operation and the impact of its manufacturing process and recycling. The UVgel abides by the world's strongest environmental standards and certifications, making them perfectly safe even in sensitive environments such as schools and hospitals.

FLXfinish technology

Along with UVgel technology, the Canon Colorado series also provides FLX finish technology. This unique technology enables the production of both high gloss and smooth, velvety matt prints, without the need for changing ink or media.