


# PRINTONE



In Germany, around 1440, goldsmith Johannes Gutenberg invented the printing press, which started the Printing Revolution.

Modelled on the design of existing screw presses, a single Renaissance printing press could produce up to 3,600 pages per workday, compared to forty by hand-printing and a few by hand-copying.

# PRINTONE

  
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This e-issue contains 13 pages including the cover.

# EDITORIAL



Dear Customer!

It's a matter of great pleasure - both personal and professional - to present the inaugural issue of **PRINTONE!**

This pandemic has enforced changes in our lifestyle. There is change not only in how we live life and work in our professions... but even in the most basic of actions... what we eat, and how we eat it.

It's not at all a surprise therefore to know that there has also been a great paradigm shift in the way we think and communicate - both in the process and in the outcome. Board meetings have been replaced by Zoom meetings, travel where and when permitted is now no longer a pleasure... and even window shopping has been replaced by online buying.

We at Popli Graphics realised that we would be till some time, unable to meet and greet you in person as before. But we also didn't want to lose our valuable relationship with you!

This bi-monthly bulletin is our idea of bridging the gap... a small step in keeping us together! This allows us to not only share our principals' latest offerings but provides an update on what's happening in our industry.

I am sure that **PRINTONE** will not only help us mutually weather the pandemic and the effects it will have on business in our sector, but will also help us to grow in this new environment.

I look forward to your feedback!

Be Happy! Be safe!  
The Editor-In-Chief

  
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Let's not brand anybody as good or bad.  
If you operate  
from a lower state of consciousness,  
the tamasik state, then your actions may not  
be proper.  
If you operate  
from a higher state of consciousness,  
from sattva guna,  
then your actions may be different.

The Bhagwad Gita says  
our inner states are constantly changing.

So, depending upon your state of being,  
your inner state correlates to your actions.

We should constantly look at our behaviour,  
at the state we are in within.  
This also helps us to softening the other's  
inappropriate behaviour that may be due to  
their state of being. More than any amount of  
attitudinal change, it is behavioural change  
that enhances the quality of life.

The Gita encourages us to be calm and  
serene, irrespective of situations.  
This is the core teaching of the Gita.

A Zen master was asked about the secret of  
his being always happy. He replied, 'When I  
wake up in the morning, I ask myself  
whether I want to be in heaven or hell.  
Then I decide to be in heaven.  
The moment I decide to be in heaven,  
I create heaven in every moment in my life.'

If you want to be happy, first decide to be  
happy. And the moment you decide,  
things will be very different.

The choice we make in our lives  
is that we let ourselves  
come either from commitment or complaint.

Invariably we find that the people who are  
powerful are those who operate from  
commitment.  
And those who are powerless, always operate  
from complaint.  
Your state of being will be powerful once you  
operate from commitment  
and by being selfless.



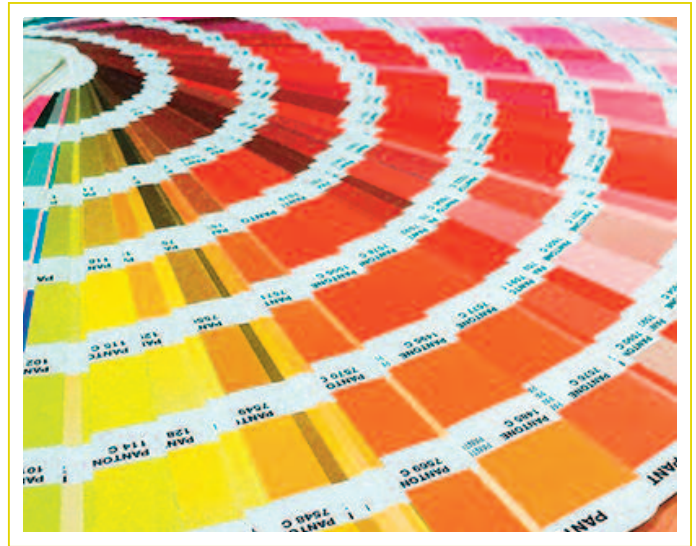
**Swami Sukhabodhananda**



# G7 - REVOLUTIONARY TECHNOLOGY FOR PRINT PROCESS STANDARDISATION

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The final appearance of colour in any printed application, including packaging, is influenced by a number of factors including print method, ink selection, and material choice.

The Fast-Moving Consumer Goods (FMCG) industry is the largest group of consumer products - and then there is the production, distribution and marketing of each product. Print labeling is a vital part of marketing, which affects and deeply influences consumer-buying behavior. The global print label market is expected to grow at CAGR of 4.2% by 2025 which is further expected to reach USD 67.02 billion by 2026; growing at a CAGR of 6.5%. Furthermore, the global self-adhesive labels market size is projected to grow from USD 46.5 billion in 2020 to a whopping USD 59.2 billion by 2025, at a CAGR of 4.9%.

Flexography is a widely used printing process in FMCG sector for label applications. Colour is the most crucial aspect of any label as it grabs the attention of each and every customer and plays a very important role in building the brand identity and buying decision.

Brand owners need harmonisation of colours on a huge variety of substrates for their applications to convey brand equity accurately to the consumers worldwide. The journey from proof-to-press does not have proper checks at each location, approvals and same metrics and thus absence of common language between the brand and printer. The increased set up time for colour matching, ink and substrate waste dramatically reduces profitability for both the brand and printer.

So, communication between the brand, suppliers (inks, substrates, plates, anilox, cylinders) and print service providers is necessary. This calls for a complete process standardisation fulfilled by an IDEAlliance specification known as G7 calibration. These specifications coming from Idealliance have transformed the entire graphic communications industry by defining production workflows for color (GRACoL®, SWOP®, XCMYK™, G7®, and BrandQ®).

The name G7 stands for 'Gray', plus the seven primary and secondary solid ink values: Cyan, Magenta, Yellow, Black, Red, Green and Blue. In simple terms, you could call G7 a calibration methodology, which brings the system to work on a common metric and eventually ensures print consistency. It is a global standard which

makes colour matching relatively easier. It also helps in effective and easier communication between the brand and the supplier, improved turnaround times, accelerated speed to market, reduced costs, and of course, improved brand integrity.

The G7 calibration is designed to align all devices, along with substrates, inks, screening technology, and also the environmental conditions. This has led to its wide acceptance. The G7 calibration process is used for both surface and reverse printing. It takes into consideration the colour

of the substrate to provide the closest colour match. The key parameters of G7 - that is, the gray balance and tonality - help to achieve shared neutral appearance between printed samples irrespective of presses, plants and also locations. Further, the make-ready time and the wastage of consumables are exponentially reduced because the struggle for color matching is eliminated. The productivity and efficiency of the printing machine increases post G7 implementation thereby increasing the profitability of the organisation.

## What makes the G7 standardisation so good and great?



Customer satisfaction is more important today than ever before. Brands need absolute consistency in any sort of colour reproduction for their brands.

As an example... take a total of three variants in three sizes making a total of nine SKUs.

With a main graphic element in CMYK for each variant to be matched across all the sizes, this job becomes typical nightmare for a printer to get it the right first time, every time.

However, after the G7 standardisation, this becomes a smooth flow - with printing all the CMYK graphic elements to the neutral grey balance and getting it right the first time.

Formatting and additional writing by Kalpana Dhingra  
Staff Writer, Training Platform



A certified G7 Press Control System automates the process of measuring special G7 gray control patches. Any deviation in those patches are then used to guide the system back to its ideal 'G7 appearance'. Utilising G7 metrics that have been added to the press control system allows the press operator to see in real time how close to the G7 targets the printing is, and what are the adjustments needed to achieve G7 compliance. The testing programme is based on a series of sample data representing different printing conditions.

## A certified G7 press control system...

- Can be submitted for certification by a manufacturer or vendor of an automated press control system

## G7 - REVOLUTIONARY TECHNOLOGY FOR PRINT PROCESS STANDARDISATION

- Is capable of measuring G7 gray control patches in real-time
- Offers real-time monitoring and/or adjustment of ink quantities to maintain consistent appearance of the printed result
- Is accompanied by an Application Data Sheet (ADS) describing the actual steps an end-user must take to successfully repeat the certification process.

### The programme...

- calculates the ideal G7 target values for tonality and gray balance
- suggests ink quantity adjustment trends likely to help the press meet those G7 target values
- correctly applies the math in TR015 to calculate target values for HR\_cmy, HC\_cmy, SC\_cmy, HR\_k, HC\_k and SC\_k for the test conditions
- indicates to the press operator, and/or directly sends to the press, approximate ink adjustment values necessary to achieve the desired target values.



The programme offers real-time monitoring, adjustment, and ink quantity adjustment for the printed result to help the press meet those G7 target values

### The programme does not certify...

- G7 press calibration (e.g. calculating offset plate curves).
- Control of single-ink TVI or 'Dot Gain' values from other specifications or standards, such as ISO 12647-2.
- Control of solid ink colorimetric or density values according to any specification such as GRACoL, or the ISO 12647-2 standard.
- Accuracy of production prints compared to a colorimetric reference print condition (CRPC) such as GRACoL, or a physical proof or reference print.

There is evidence that the use of the concept of mass duplication in India dates back to the time of the Indus Valley Civilization. Grants of land were originally recorded by engraving all the information on copper plates and etchings on different surfaces like wood, bone, ivory and shells. However, printing really arrived about a hundred years after the Gutenberg Bible was first printed.

The art of printing first entered India through Goa. In a letter to St. Ignatius of Loyola, dated 30 April 1556, Father Gaspar Caleza speaks of a ship carrying a printing press setting sail for Abyssinia from Portugal, with the purpose of helping missionary work in Abyssinia. The prevalent route from Portugal to Abyssinia then required ships to round the Cape of Good Hope, touch Goa and reach Abyssinia. The press thus reached Goa, but soon after, news came that the Abyssinian Emperor was not really keen on receiving the missionaries.

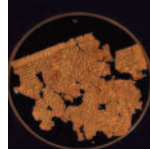
Around the same time, the clergy in Goa felt the need for a printing press and on their request to the then Governor-General the press was made available to them.

## MOMENTS IN PRINTING HISTORY



## INDIA'S (and Asia's) FIRST PRINTING PRESS

India's first printing press along with some of the first ever documents printed in India



Thus, circumstances prevented this printing press from leaving India, and consequently, the press stayed in Goa. Printing operations began in Goa in 1556 (with the printing press being established at the Jesuit Saint Paul's College in Old Goa).

The individual responsible for the initiation of printing in India deserves a mention. One Joao De Bustamante, who was an expert printer, along with his Indian assistant set up the new press and began to operate it.

Another Spaniard was to play a major role in the history of printing in India was one Joao

Gonsalves, who is credited with preparing the first printing types of an Indian script - Tamil. Due to faults in the smelting, the casts were not satisfactory, and new casts were made in Quilon (now known as Kollam) by one Father Joao da Faria. On 20 October 1578, these types were used to print the first book in an Indian language in India.

However, the first Tamil book was printed in Lisbon in 1554 in a romanised Tamil script.

# POPLI GRAPHICS MARKS FIVE YEARS OF A RELATIONSHIP WITH ESKO

Popli Graphics will this year celebrate five years of working with Esko, the global developer of integrated software and hardware solutions for the packaging and label sectors.

In 2016, Popli Graphics entered into an agreement with Esko to manage its flexo pre-press solutions business in the northern India region. Since the very beginning of this relationship, Popli Graphics was authorised to present Esko prepress software and digital flexo solutions, packaging designs, its folding cartons and labels, to customers in the region, as well as trade shops and designers.

Samarth Chandrashekar, Pre-sales and Customer Support Manager at Esko, says, "This has been a very productive relationship, for both Popli Graphics and ourselves. The network of customers served by Popli Graphics has enabled us to reach a far broader customer base with our innovative range of solutions, and we really look forward to continuing this relationship in the future."

The range of integrated solutions available through Popli Graphics now includes the very latest innovations from Esko, including these...

## Automation Engine



An automated workflow solution that automates prepress tasks and integrates with business systems, which speeds up the process, and more importantly reduces the error rate and need for operator intervention.

Esko recently unveiled a major new release of this market-leading solution, packed with new capabilities and for the first time available as a Software-as-a-Service ('SaaS'). Users can access their personalised, secure workspace at any time, from anywhere, in the new My Workspace user interface.

For customers looking for even more flexibility, Esko has introduced its new cloud-based offering, which takes the prepress experience to a new level in terms of quality, productivity, data security and connectivity.

Esko will also be at this year's virtual drupa, where the company and Asahi Photoproducts will unveil their next-generation fully automated flexo platemaking line CrystalCleanConnect.

## About Esko

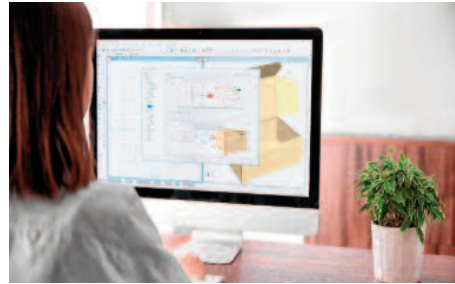
Esko, a Danaher company, is a global provider of integrated software and hardware solutions that digitise, automate and connect the go-to-market process of consumer goods.

## Art Pro+



Esko has also launched the latest generation of its award-winning native PDF editor for packaging and label prepress, ArtPro+. With a new Variable Data Printing module and full integration with HELL gravure equipment, the latest version of the market-leading software delivers a further boost to prepress operational excellence.

## ArtiosCAD



With more than 23,000 users worldwide, ArtiosCAD is the leading structural design software tool, specifically created to boost productivity for packaging structural

designers, product development processes, virtual prototyping and die cut manufacturing operations.

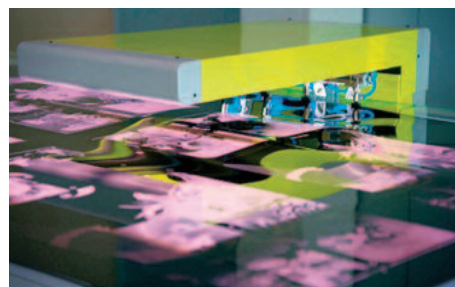
With unrivalled performance in CAD design for packaging and displays, preflight software delivers an even greater efficiency boost by saving users up to 15 minutes per design, eliminating the need for manual checks and standardising design checks across a user group.

For all CPG and pharma brand owners, the Esko collaborative content creation platform for packaging, label, and marketing collateral equips the marketing, branding, regulatory, and packaging teams to increase productivity, reduce costs, save time in their content processes, and then consistently meet their deadlines for marketing and packaging projects. For all packaging manufacturers, the Esko range of prepress, flexo platemaking and print inspection solutions connects people, processes and tools and brings consumer products to life with greater accuracy, quality, efficiency and speed.

Packaging for 9 out of 10 major brands is produced by Esko customers. Headquartered in Ghent, Belgium, Esko operates worldwide with a unique focus on packaging and labels the consumer can trust.

For more on Esko and its innovative solutions, visit [www.esko.com](http://www.esko.com)

## ArtiosCAD



The Esko CDI Crystal imager is designed to connect seamlessly with the XPS Crystal digital UV exposure device.

Combining high resolution fiber laser imaging, with patented back and front UV LED exposure from the XPS Crystal, the combination produces digital flexo plates with unique reproducibility and quality.



# DU PONT at VIRTUAL drupa - NEW PRODUCTS - LATEST INNOVATIONS

Formatting and additional writing  
by Guliz Basra  
Staff Writer, Training Platform



DuPont participated as a Gold Event Partner in the 2021 virtual drupa show

DuPont participated as a Gold Event Partner in the virtual drupa show which was recently held from April 20th to 24th. At the show, DuPont presented the latest innovations for the Cyrel® Solutions flexographic systems and also launched new flexo plate and platemaking equipment offerings. In addition, Artistri® Digital Inks presented its large portfolio of inkjet inks for commercial, packaging and textile applications both in the show room and during interactive web sessions.



**Sam Ponzio**  
Vice President, DuPont Industrial Solutions

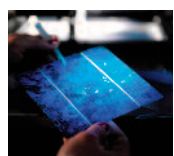
Sam Ponzio confirmed DuPont's commitment to the virtual show, saying "As a key supplier to the graphic industry, DuPont has always enjoyed the personal interaction with customers and the industry at drupa. Furthermore, the exhibition serves as a huge platform to introduce the latest technology developments. This time, drupa will be virtual and we will miss meeting in one place and interacting in person with our industry peers and our colleagues, but this does not change our focus. We are happy to be part of the first virtual drupa ever and interact with our customers and all our colleagues virtually."



**Christian Apenberg and Scott Rickard from Cyrel® Solutions** presented the latest developments in the successful Cyrel® EASY plate family and Cyrel® FAST thermal processing technology for increased quality, productivity and sustainability in flexographic platemaking at virtual drupa.



In addition, **Eric Beyeler**, Marketing Manager, **Artistri Digital Inks** gave a presentation in the Touchpoint Textile session, "Make sustainability fashionable, make fashion sustainable." Beyeler discussed how pigment inkjet printing in particular could deliver beautiful, durable printed fabrics, a low environmental footprint and a short supply chain to the world of fashion and garments.



### About DuPont Electronics & Industrial

DuPont Electronics & Industrial is a global supplier of new technologies and performance materials. The company serves not only the semiconductor, and the circuit board industries, but also the display, digital and flexographic printing industries, and also the healthcare, aerospace,

industrial and the transportation industries. From advanced technology centers worldwide, teams of talented research scientists and application experts work closely with customers, providing solutions, products and technical service to enable next-generation technologies.

### About DuPont

DuPont (NYSE: DD) is a global innovation leader with technology-based materials and solutions that help transform industries and everyday life. Our employees apply diverse science and expertise to help customers advance their best ideas and deliver essential innovations in key markets including electronics, transportation, construction, water, healthcare and worker safety.

More information about the company, its businesses and solutions can be found at [www.dupont.com](http://www.dupont.com).

## Interesting facts you may not have known!



- 1 **Johannes Gutenberg died a poor man?**  
He was sued by his wealthy business partners in 1455 and lost the lawsuit, which resulted in the iconic printer being forced to give up his printing business and, ultimately, went into financial ruin, before his death in 1468.
- 2 **Typefaces/fonts were originally created by hand and often named after the printer who created them?** A great example is French printer Claude Garamonde; his font is still in use today.
- 3 **The Black Death significantly contributed to the evolution of the printing process?** The dead left a surplus of clothes, which were inherited by the living, who disposed of their old, worn garments. The discarded clothes were used to make 'rag paper' an inexpensive alternative to parchment (sheepskin) and vellum (calfskin)- the only materials used in bookmaking at the time. Rag paper was a real bargain compared to the hundreds of calfskins and sheepskins it took to make one copy of the Bible - which was the staple text being produced.

# ANOTHER UNIVERSE OF PRINTING: INDIA'S RICH CULTURE OF BLOCK PRINTS

Jaipal Anand

Executive Editor



For India, block prints hold a place of pride - the age-old craft of dyeing and colouring a fabric using wooden blocks has been perfected over generations. Whether it is Rajasthan's popular Dabu print, which uses the mud printing technique, or Gujarat's Ajrakh, featuring geometric motifs, each block print is symbolic of our vast heritage and rich culture - India is, after all, one of the largest manufacturers and exporters of block printed fabrics.

## Tracing the history of block prints

The oldest record of Indian block print cotton fragments have now been excavated at the Indus Valley civilisation, from around 3500 BCE. At the Mohenjo-daro site excavation, needles, spindles, and cotton fibres dyed with madder (a red pigment obtained from the root of the madder plant) have been excavated. This proves that Harappan artists were familiar with mordants, or dye fixatives.

However it was only under the Mughal patronage that block printing flourished in India. The Mughals introduced the intricate floral motifs that are still widely used in the hand block printed textiles. Printing and dyeing of fabrics like cotton originated in Rajasthan, and was then adapted by Gujarat. Today, the art form is practiced in the states of Andhra Pradesh, Punjab, West Bengal, Madhya Pradesh, and Uttar Pradesh.

The famous centres in Rajasthan are the cities of Jaipur, Bagru, Sanganer, Pali and Barmer, and these centres are known for their colourful range of prints of gods and goddesses, humans, animals and birds. While Bagru is renowned for its 'syahi begar' and 'dabu' prints (that come in yellow and black and are done using the resist printing technique), Sanganer is famous for its 'calico' (recognised by dual colour prints which are repeated in diagonal rows) and 'do rookhi' prints (that come on both side of the fabric). Barmer is known for its prints of red chillies and trees featuring a blue-black outline, while Sikar and Shekhawat prints feature motifs of horses, camels, peacocks and lions.

In Gujarat, the well-known centres are Dhamadka, Kutch, Bhavnagar, Vasna, Rajkot, Jamnagar, Jetpur and Porbandar. Ajrakh prints originate from Dhamadka, and feature geometric motifs made using natural colours.



Block printing captures attention  
Human errors - tiny variations and imperfections - make the process not only unique, but also so charming!

Kutch's popular motifs come in red and black designs of women, animals and birds.

Punjab's Chhimba community, which is a group of textile workers, use a print with floral and geometrical motifs in light pastel hues. And West Bengal's Serampore is known for using vibrant patterns.

## The process of block printing

The process of block printing is a tedious one... the blocks themselves require 10-15 days to be perfected. It all begins with a fabric that is first washed free of starch. If tie-dyeing is needed, it is done at this stage, and if the fabric is already dyed, it is washed to remove excess colour, after which it is dried in the sun. The next step sees the fabric pinned on the printing table. Meanwhile, the colours are prepared and kept on a tray containing glue and pigment binder to ensure a soft base for the colour, and to allow it to easily spread on the block.

Once the blocks are ready, they are dipped in the colour and then pressed on to the fabric. The process is repeated over and over again until the length of the fabric is completely printed. This demands a fair amount of precision from the artisans to ensure there are no breaks in the motifs. If there are multiple colours, the artisan waits for the first print to dry, and then other inks - or the same ink - is used with different blocks. The fabric is left to dry in the sun. Once dry, the are steamed, washed in water, dried in the sun again, and lastly, ironed as part of the post-printing process.

## What makes block printing so unique?



Blocks are usually made with sheesham, teak, sycamore or pear wood. Once designs have been made with chalk paste or pencil+paper, they are hand-carved, and then soaked in oil for at least two weeks to soften the timber. Each block is used for one colour only... be it for motifs, outlines or even for just filling in areas. Markers along the sides of the block are used as guides by the printers.

In India we generally see three widely-used techniques of block printing - there is direct printing, resist printing, and then, discharge printing. Direct printing sees the fabric being bleached first, then dyed and finally printed using blocks (first the outline blocks, and then other blocks to fill in colour). Resist printing requires some areas of the fabric to be protected from the dye, which are shielded with the use of clay and resin. The dyed fabric is then washed, and the dye spreads through the protected areas, providing a rippled effect. The last of the techniques - discharge printing - on the other hand, sees the use of chemicals to remove portions from dyed fabric which are then filled in with different colours.



# TOLUENE-BASED INKS NO LONGER IN USE IN FOOD PACKAGING

Formatting and additional writing  
by Advik Kamdar  
Staff Writer, Training Platform



Siegwerk has a strong commitment to provide safe, non-toluene inks for all kinds of NP&H (Nutrition, Pharma & Hygiene) applications globally

Toluene (methylbenzene) is an aromatic hydrocarbon (C<sub>6</sub>H<sub>5</sub>CH<sub>3</sub>), which is a colorless, flammable liquid. It is widely used as an industrial solvent. Toluene is used in making paints, paint thinners, adhesives, and rubber, fingernail polish, lacquers, and also in some printing and leather tanning processes. Additionally, it is used as a solvent in printing inks, including for those in food packaging materials.

According to official numbers, almost 80% of printing ink used in food packaging in India is toluene-based. The concentration of toluene in printing inks can be as high as 40%. Toluene is predominantly used in most solvent based inks not only because it is a very good solvent, but also because it is very cheap. However, toluene does have a hazardous toxicological profile. Exposure to toluene can occur in two different ways.

One is through migration, where Toluene can migrate through the packaging material into the food which is eventually consumed by the consumers. Other means is through inhalation and exposure to toluene while handling the solvent based inks by the operators and other workers during the printing and subsequent conversion processes.

Migration of contaminants from the packaging material to the food is becoming an increasing concern for the packaging supply chains. Almost all the printed structures which are printed with solvent based inks contain a certain amount of solvent (such as toluene) called retained solvent despite all the drying controls established during the conversion process. Most of the flexible packaging substrates as well as rigid materials like PET bottles do not possess adequate barriers to the diffusion of toluene.

Toluene has earned global disrepute for its extremely bad toxicological profile. The manifold adverse effects make it an issue related to consumer, occupational, and environmental safety. Its developmental toxicity requires Toluene to be classified as a CMR category 2 (suspected of damaging the unborn child) substance.

Residual toluene in packaging also impacts the organoleptic properties of the product thus leading to food quality and safety issues. Odour threshold varies:

0.5 – 100 mg/m<sup>3</sup> (130 ppb – 26 ppm) depending on the source. This level in comparison to other solvents is very low.

Amongst many other adverse health effects which can be caused by toluene exposure, one of the most critical effects is ototoxicity. This is especially relevant for all workers in production as the ototoxic effect is intensified by industrial noise and can end up in anacusia.

Toluene is also used as a sniffing drug and the practice is widespread among children and adolescents globally with epidemic proportions in Singapore while 3-4 % American teenagers are also using toluene as a gateway drug.

## What makes block printing so unique?



With their Ink Safety Portal, Siegwerk has established another tool to share and spread their know-how along the packaging chain.

As a leading supplier of printing inks in food packaging applications, Siegwerk is strongly committed to product safety and transparency to support our customers in manufacturing safe products.

Their Ink Safety Portal is all about knowledge sharing especially regarding crucial PSR topics for printing inks, like raw material qualification, regulatory affairs, compliance, exposure assessment, or direct food contact.

The unfavorable toxicological properties of toluene are the reasons why global food brand owners like Nestle, Ferrero, etc. have restricted or even completely banned the usage of toluene in ink formulations intended for food packaging material of their products. For years, European and US markets have been using Toluene free inks for food packaging while China has also imposed a legal ban on toluene, so that it cannot be used as a solvent in printing inks for food packaging.

Finally, the Food Safety and Standard Authority of India is taking concrete steps to ensure consumer safety by raising the bar of packaging safety. FSSAI has enforced the Food safety and Standard (Packaging) Regulations, 2018 from 1st July 2019. The standard clearly indicates that a packaging material is to be considered food grade when the material is made of substances which are safe and suitable for their intended use, and shall not endanger human health or result in unacceptable change in the composition of the food or organoleptic characteristics. In this context, with the manifold adverse implications, use of toluene based inks in packaging material will not allow the packaging material to qualify as a food grade packaging material.

FSSAI also mandates the brand owners to use inks for their packaging material which are complying to IS 15495. IS 15495 is a standard created by Bureau of Indian Standards and is recently been revised. IS 15495

## TOLUENE-BASED INKS NO LONGER IN USE IN FOOD PACKAGING

in its current form re-iterates those concepts of acceptable food grade packaging materials where packaging material shall be so manufactured that under normal or foreseeable condition of use, they do not transfer their constituents to the food in quantities, which may endanger human health, cause a deterioration in the organoleptic characteristics or otherwise constitute an unacceptable change in nature, substance and/or quality of food. BIS has also now made amendments to the standard as follows:

- Sum of concentration levels of Lead, Cadmium, Mercury and Chromium (VI) shall not exceed 100 ppm for printing inks.
- Addition of Toluene, DBP, DiNP, and Titanium Acetylacetonate to the existing Annex A, which lists the materials and substances that needs to be excluded from printing ink formulations.

As per the amendments made, toluene's use will no longer be allowed as a solvent in printing inks intended for food applications thus ensuring safe packaging for consumers. Phasing out toluene will not happen in an instant, but it is a step in the right direction. The group that will ultimately benefit the most are the workers in printing companies as their occupational exposure to toluene will be significantly reduced, while the risk to consumers and the environment will also be minimised.

Siegwerk has a strong commitment to provide safe inks for all kinds of applications and establishes and exercises adequate control to make sure only compliant inks reach our customer which is completely in line with our commitments. In principle, in all products supplied by Siegwerk for NP&H (Nutrition, Pharma & Hygiene) applications globally, toluene or any other raw material containing toluene is not used as an added ingredient.



At the Siegwerk warehouse

### Printed food packaging



Within printed food packaging, exposure and migration are two elements of utmost and key importance.

The exposure assessment is in a first step a migration assessment that depends on several factors, e.g. the storage conditions of the packaging or the total amount of ink applied.

Secondly, the exposure highly depends on the consumer's eating habits. The better the knowledge about consumed quantities and food types containing a specific migrant, the better the assessment.

Siegwerk also recognises that since toluene is a volatile contaminant and hence cross-contamination can occur within the ink manufacturer facility if toluene-based and toluene-free inks are been manufactured in the same facility. Upholding our strong commitment to product safety, Siegwerk India decided to operate in a toluene free environment to rule out any possibility of such cross contamination.

In the past few years, Siegwerk India has developed a well-established portfolio of toluene free inks intended for various applications existing in the Indian market. These toluene free inks are produced from a facility which stopped the purchase of toluene since Nov '17. These alternative ink systems developed by Siegwerk exhibit better performance and a better toxicological profile.

For more details on any Siegwerk products drop a mail to us at [info@poplgraphics.in](mailto:info@poplgraphics.in)



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We'd also be extremely grateful if you let us know... in the same mail... where and how you got to know about us!

# A CUSTOMER'S TESTIMONY: POLY-PAK FOR



Formatting and additional writing  
by Shaurya Bassi  
Staff Writer, Training Platform



Poly-Pak's new press has allowed Poly-Pak to print a variety of work, from narrow to wide, and from one to eight colours.

## Poly-Pak Industries, Inc.

### Putting new press technology into action

Poly-Pak Industries Inc., a Melville, New York-based film extruder and converter, was founded in 1958 by Len Levy. The company's three shifts of more than 300 employees typically makes and converts polyethylene and polypropylene films for bags, envelopes and roll stock. They also provide a wide array of packaging products, including compact reusable polyester bags, paper bags, and promotional paper and specialty bag products for an extensive list of industries.

"My first experience was as a helper on a flexo press. We had five presses at the time," remembers David Perelstein, printing manager. "The presses were all roll-to-roll - all synthetic and rubber plates. Doctor blades weren't even being used at the time. It's come a long way since then."

The challenges of remaining competitive in today's marketplace required Poly-Pak to keep up with current technology. "We've been looking for a long time for the right flexo press that could serve the needs of all our customers and our company. It needed to be efficient and reliable, and to meet our customers' demanding quality standards," says Perelstein. "We finally decided to invest in an 8-color Premia flexo press from SOMA Engineering."

The eight-color press was installed in November, 2017, and has been printing almost everything that passes through the plant. Three things that impressed Poly-Pak with their machine were the changeover, the print quality and the speed. It is a gearless system with sleeves. "It takes us less than 30 minutes to get up and running, compared to 2-3 hours on our machines without sleeves," notes Perelstein.

The installation went pretty easily because the new press was placed where Poly-Pak had previously located other presses. Once it was installed, service crews from the plate and ink vendors helped to fingerprint the press.

SOMA provided training for two weeks for all shifts - and returned a month later, for another week. The first training session was to teach the service crews about how to operate the press. The subsequent second training session was then to optimise use - to help the service crew with any difficulties and answering any questions that the service crew may have gathered after having a few weeks of experience with the press.

### Printing everything that runs through the plant

Poly-Pak's new press has allowed Poly-Pak to print a variety of work, from narrow to wide, and from one to eight colours. They have been able to print plastic or paper, from the thinnest films to heavy-gauge material. "The variety of products we have been able to print, from the graphics, to the process, to the surface to different substrates, is endless. We've schedule them as efficiently as possible," comments Perelstein. "Also, the machine has also been extremely reliable and fast - it likes to print at least a thousand feet a minute. The automatic impressions technology offers us seamless, optimal printability and output, all day long."

While the Premia flexo press does not have an ARUN system, it does have a semi-automatic system. The printing decks are moved to the drum until there is contact between the plate and substrate. The average waste is only about 60 feet - all done without printing. The 'drag and drop' registration system is used along with a video camera. The press prints enough material to locate microdots on the micro camera. A snap shot is taken, and the operator just points out where the microdots are. The press does the rest.

"While we have always been able to print with reasonably respectable quality, until now it was achieved through an optical process during the pre-press mounting and the visual inspection of registration while the press was running" adds Perelstein. "With our press, we have taken print to the next level. Registration is near-perfect on any job, whether we're running two or eight colors. The press has been able to hold register on anything, on any thickness of substrate."

The press has inspection areas to assure a colour match, also look for blemishes, and assure barcodes are printed correctly. "Some people take barcodes lightly, but if barcodes are not correct, the product can't be sold," advises Perelstein.

### Service: The importance of keeping the machine up and running

Anyone who makes any sort of investment knows that the equipment or software system is only as good as the company that stands behind it.

"Service is critical because a machine that is down doesn't produce any revenue," explains Perelman. "The amount of cost and revenue that is lost every hour can be insurmountable. In a high volume plant there's no time to make it up. There's not another shift or another day. So, quick response is crucial to get these machines back up and running."

## A CUSTOMER'S TESTIMONY: POLY-PAK FOR SOMA ENGINEERING AND DKSH

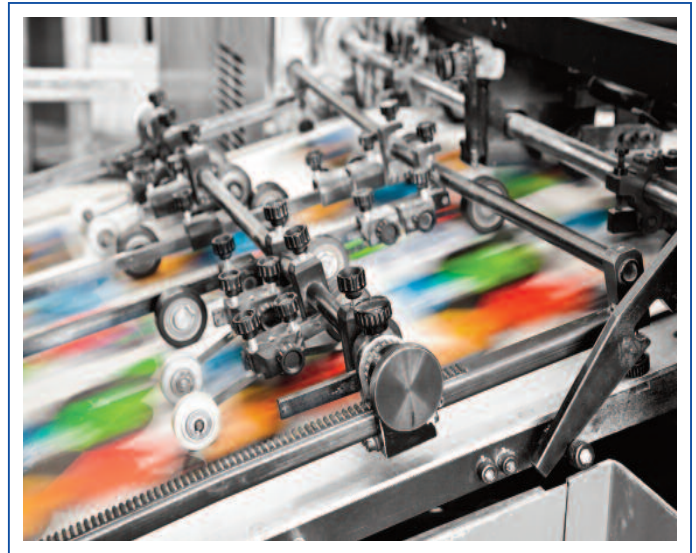
"As with any thing as complicated as a large machine getting installed and getting commissioned, small bugs do occur," comments Perelstien. "However, from the first day, the communication between Poly-Pak and SOMA has been seamless. Any time that any issue arose, someone based in the US always responded quickly. We're really very happy with their service department. They do a great job representing their company."

It was also important to Poly-Pak that there was an Internet connection where the manufacturer could interact with the press and proactively anticipate problems, eliminating downtime. Then the press monitoring system can supervise press efficiency and energy consumption - and help management review press performance remotely from anywhere in the world.

### A replacement for two or three presses

Poly-Pak is able to run their new press at almost maximum speed. "We have experienced a tremendous increase in output," assesses Perelstien. "Our guess would be that the press is 2-3 times faster than any other machine we have in the building."

Poly-Pak is currently running eight presses. They had scrapped an older machine a while ago and, since the installation of their new press, have removed another. "We have proven that at least two older presses can be replaced with this one machine. I think that after our learning



Poly-Pak has experienced a tremendous increase in output. Their guess is that the press is 2-3 times faster than any other machine they have in the building.

process - as we become more familiar in the use of the press - there's no reason that it couldn't replace three machines," determines Perelstien.

### Poly-Pak's press separates the printing unit and roll-handling zones.

For example, if they determine that they need inline lamination, slitting, perforation, or upstream/downstream units, it can be done at minimal additional cost. This allows them to customise their press if they have specific needs in the future.

"Our new SOMA Premia press is a sturdy, high-quality well-engineered machine. Its printing ability seems to be almost unlimited," concludes Perelstien. "We expect that this press will print as well ten years from now as it does today."

### Pressing Humour



## Interesting facts you may not have known!



### Printing was actually invented by the Chinese, not Johannes Gutenberg!

**1** Gutenberg invented the printing press, not printing. Over 500 years before Gutenberg mass produced books with his revolutionary machine, Chinese monks were using wooden blocks dipped in ink and pressing them on parchment to create text.

### The Chinese also invented business cards!

**2** In the 1400s, the Chinese began using versions of a business card. These cards were used as calling cards, used to announce a meeting with another businessperson.

### Only a convict knew how to use Australia's first printing press!

**3** Australia got its first printing press when a small hand press was brought over with the First Fleet in 1788, but no one knew how to use it. Between 1795 and 1880, a convict named George Hughes taught himself how to use the press and was commissioned by New South Wales governor John Hunter to print orders and regulations.

# A CUSTOMER'S TESTIMONY: CAMPOLINA FOR



**Campolina Offset Printers**  
A HOUSE OF QUALITY PRINTING

## Appreciation letter

Our association with Autoprint goes back to 2014 when we installed FC65 coating. We were happy with the performance & services provided by their North India Dealer, Popli Graphics. As per current demand we placed order of FC80 drop off. The machine got stuck in mid of National Lockdown. But thanks to North India service team, installed machine in midst of pandemic!

We also received well guidance regarding raw material from Popli application team in North & would look forward to more fruitful association.

Thanks,

For Campolina Offset Printers



Partner

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# Starry Fortunes



**Aries**  
Mar 21 - Apr 19

You will manage to do well in a team project and will find people to join you quite easily. There will be an appearance of some new collaboration relationships and contracts, and the resumption of some older ones. You will be able to promote your business, image, aptitudes. This is a favourable period for broadening your horizons, for studies and for contacts with foreign people or with people at a distance. However, money could be a troublesome topic.



**Taurus**  
Apr 20 - May 20

A good period ahead is in store for you! Misunderstandings will clarify, blocks will disappear, what has been interrupted will be resumed. You may have a beginning of a sentimental relationship. Your work will be active, but tense, and you may be stressed out. There will be big and urgent demands will be, things will take unexpected turns when you least expect them to, and you'll find it difficult to coordinate your efforts. You may have a feeling of dissatisfaction.



**Gemini**  
May 21 - Jun 20

You'll begin a difficult and ambiguous period as regards relationships. Your partner might drift apart or have problems. The good side of things is that, beyond all these, there will be enough offers and plenty of opportunities to have fun but new initiatives will not have much success. You may be obliged to do work that you don't like or that confines your horizon, or to lack of recognition for the value of the effort you've made. Financially however, you'll notice some improvement.



**Cancer**  
Jun 21 - Jul 22

You'll captivate and challenge others to get closer to you. An active and sentimental life can be expected, but do not mix money and love. Your qualities as a leader will not be recognized, but there will be opportunities that will lead to several better positions. Accomplishments are related to intellectual activity. Financially, you might get some extra earnings. Healthwise, you'll be in an excellent shape, overflowing with energy and vitality, but may experience some irritation.



**Leo**  
Jul 23 - Aug 22

If there have been unusual situations, blocks or delays in the past weeks, clarification and solutions will start to appear. Friends could be helpful, giving you advice or mediating. Participating in the social life or various group activities will also be beneficial to the relationship. The phenomenon will positively reflect on the financial level as well, where an extra sum of money, a benefit, recuperation or rightful coming to possession could come along. Health may cause minor problems.



**Virgo**  
Aug 23 - Sep 22

Expect problems due to faulty communication, carelessness, confusion or bad assessment. Express yourself clearly, but in a diplomatic way, and listen patiently! This will not be a good time for making decisions, but any activity done with pleasure may result in an accomplishment. People from the past might reappear in the present. You might benefit from family support and finances will depend a great deal on partnerships. There may be a solution to a long pending issue of health.



**Libra**  
Sep 23 - Oct 22

Communication and information will play an essential role and some aspects of your private life can be subjected to thorough analysis. Romantically, this is a great time. Your partner will provide positive support to your relationship but will ask you to take some decisions that may annoy you. A state of indecision will however force you to stay in a safe, conservative zone. Do keep in mind that your partner too needs space, so give them the freedom they need.

**BE SOFT.  
DO NOT LET THE WORLD  
MAKE YOU HARD**

**DO NOT PAIN MAKE YOU HATE.  
DO NOT LET BITTERNESS STEAL THE SWEETNESS.**

**TAKE PRIDE THAT EVEN THOUGH  
THE REST OF THE WORLD  
MAY DISAGREE,  
YOU STILL BELIEVE IT  
TO BE A BEAUTIFUL PLACE.**

**IT'S THAT SIMPLE.**

**Scorpio**  
Oct 23 - Nov 21



Improvement in your work, relationships and finance will happen if you and your partner have shared professional interests. Be patient and understanding because the period will not exactly be easy, but it can be overcome with wisdom and humor. There are chances of travel, related especially to documents or negotiations. Good communication will be essential to success. Health still needs to be watched. No matter the problem, it has to be treated immediately and seriously.

**Sagittarius**  
Nov 22 - Dec 21



Romance is in the air. This will be time for having fun together. However, financially this may not be a good time and work will be much more demanding than you would have expected. Professionally unsettling with health problems appearing unexpectedly. You will need patience, because you might have to deal with delays and losses in agreements and negotiations. But don't give up, the situation should improve. Leave all the important decisions for the end of the month.

**Capricorn**  
Dec 22 - Jan 19



The immediate period will be rich in events. Some matters will be concluded, things will clear up and new projects will come up — but you will have to work hard at the details. Patience, discipline, and rigorous work will be required, and while earning will be nice, your management of finance may lead to stress and possible health issues. Guard yourself especially accidents, which can take place either when travelling or when handling objects carelessly.

**Aquarius**  
Jan 20 - Feb 18



You will have some preoccupations, probably related to money or possessions and your partner may not support you on account of social status requirements. In that case, your personal development will be complicated. You may have to invest in the future, and make an effort to obey norms even if you do not like the process. Situations will be rather tense and a lot will depend on your health. Think twice about each decision you make because problems might occur at any time.

**Pisces**  
Feb 19 - Mar 20



Chances are that you will meet persons you haven't seen for a long time and the results will be great — but be sure to set the objectives clearly and decide on your priorities. You will find information that you want. Be careful what you say, promise, write or sign! This is a time for financial balance and negotiations but you will be able to overcome delays. There could be some positive changes in health, and this will reflect on your work — especially if it is a creative process.