# [FUNDAMETALS]

A newsletter publication of the International Metal Decorating and Packaging Association | 2021



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#### Why Metal?

Why metal is the package of choice: Brand differentiation, performance, sustainability, food safety, and economic impact. *Read article* 



#### Interview: Erik Rosenstrauch

Challenges and Tactics for Winning in Today's Environment. Follow-up to the 2019 IMDPA conference keynote presentation. *Read article* 



#### Scumming-The Most Common Litho Defect

By Jack Knight Symptoms, problems, and recommended solutions for troubleshooting this litho defect. Read article



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**Cover Story** 

# State of the Industry 2020 to 2025 Source: Mordor Intelligence

Global Metal Packaging Market - Overview

he metal packaging market was valued at USD 138.11 billion in 2020 and is expected to reach USD 193.24 billion by 2026 and grow at a CAGR of 4% over the forecast period (2021-2026). Recyclability of metal packaging is one of the significant factors that is expected to drive the global metal packaging market over the forecast period. Aluminum and steel packaging materials are the two most robust raw materials for packaging due to the superior recycling infrastructure. Most of the North American and European companies prefer to advertise that their products are packed with sustainable materials. In many cases, green/eco-friendly packaging is crucial for the consumers in the region while choosing a product.

# **Metal Packaging Products**

The demand for metal packaging products such as aluminum cans in the United States and Europe has always been on the higher side. With the growing middle -income group population, changing lifestyle, and evolving consumer preferences, the consumption rates in the Asian and Southeast Asian countries are also rising steadily.

# Popularizing Aluminum Beverage Packaging

In June 2019, Hindalco Industries Ltd, a company of the Aditya Birla Group, Can-Pack India, and Ball Beverage Packaging (India), formed a consortium to popularize the use of aluminum beverage packaging. The consortium, called the Aluminum Beverage Can Association of India (ABCAI), advocates replacing plastic and glass with aluminum as packaging material. Moreover, the use of aluminum cans in the country is 5%, and the association's objective is to help its growth to about 25% by 2030.

<sup>\*\*</sup> Committee Chair

# Food And Beverage Industry

Metal packaging is also finding extensive application in the food and beverage industry, as it is suitable for protecting food content, ensuring a longer shelf life than most other packaging solutions. In contrast, heavy-duty metal containers, such as drums, IBCs (Intermediate bulk containers), are used in the transportation of oil, chemicals, and bulk liquids.

# Urbanization And Increasing Demand

According to the United Nations, the world is urbanizing rapidly; the proportion of people living in urban areas is expected to increase to 66% by 2050. As urbanization is picking up, and rising affluence, diet is changing, characterized by a high demand for packaged food. Additionally, excellent preservative properties and structural integrity of the various metal product types, offering higher shelf life, have resulted in the high usage of metal packaging in the food packaging industry.

Metal packaging is suited as containers for beverages as they are easy to cool, great for keeping the contents fresh and prevent breakages when on the go, due to the material's strength.

Ready or on-the-go meals have also been witnessing a steady demand for their convenience, especially among consumers with busy lifestyles. Therefore, large organized retailers have started to stack vast amounts of canned food and beverages. Nowadays, offline and online retailers stock a wide range of brands of packaged food items in their stores.

## **European Producers**

With nearly 98 billion packaging units produced each year and four groups being consumed weekly by every EU citizen, in the wake of COVID-19, Metal Packaging Europe (MPE)



Dear IMDPA Members, Partners, and friends,

With every challenge comes opportunity, and I can say that the IMDPA community has demonstrated great resilience and resourcefulness during these unprecedented times.

The association has always been a spokesperson for the advancement of metal decorating and packaging and believes that now more than

ever – following the epidemiological emergency Covid-19 – the social, cultural restart of our economy depends on the collective efforts of us all.

Beyond what anyone could have anticipated, the global pandemic demanded innovation from all of us. The IMDPA immediately took action and adjusted our priorities, reducing overheads, setting budgets and planning for the future. Board members and volunteers have stepped up to provide support and continue the vital work of the association.

Initiatives have been undertaken that continue and enhance the delivery of membership value:

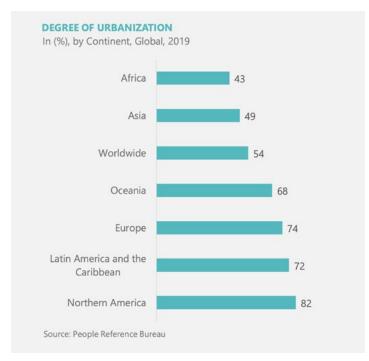
- 2021 Annual Conference Planning is in full swing
- 2021 Webinar Program Planning has begun
- Membership Onboarding and Retention Program is being built
- NEW FundaMetals Quarterly Newsletter is at your fingertips
- NEW Product Innovations e-newsletter is issued every other month
- Virtual content development for social media platforms is being developed
- Website updates, improvements and optimization is continually being worked on

We look ahead in 2021 with optimism and resolve and we hope you enjoy the first issue of our redesigned newsletter —FundaMetals. The challenges facing the association are numerous and profound but we are committed to doing our part in facilitating collaboration and dialogue to help the members in our community recover, advance, and thrive. None of this would be possible without the support of our members and partners, for which we are immensely grateful.

Here's to your health and well-being.

Sincerely, Renee Schouten *President*, IMDPA

association led the European producers of rigid metal packaging to recognize the metal packaging sector as essential in ensuring the uninterrupted flow of critical goods.

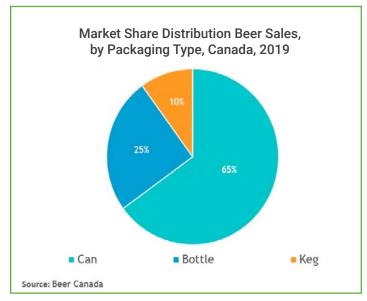


Expansion projects by multiple beverages can manufacturers have helped the countries meet the growing demand for metal cans over the past few years. However, delays have been experienced due to country-specific travel restrictions and safety concerns. Moreover, multiple supply chain disruptions have led to significant manufacturers to report setbacks. For instance, in May 2020, Ball corporation announced delays in beverage packaging projects in Europe and Brazil due to the restrictions imposed by the COVID-19 pandemic.

# **Key Market Trends**

# Cans Are Expected To Hold A Significant Share

Of all the different kinds of metal packages, cans have been the most popular. Ease of use and availability has aided in the adoption of metal cans in several packaging applications over the last century.



# Small Size and Multi-packaging Formats

Additionally, consumer trends, such as a preference for small-size and multi-pack packaging formats, support the volume growth of the global metal cans demand. Increasing demand for mini-cans has been observed, especially in the Asia-Pacific markets, such as India, China, and Japan. Therefore, most of the beverage companies in the region offer mini-cans, which generally contain smaller volumes of products and cost less than the traditional canned products. This trend is resulting in more substantial unit consumption.

# Environmental Impact (lowered energy use)

With the increasing environmental concerns, consumers are demanding metal cans due to their low environmental impact. For instance, recycling of steel and tin cans can save up to 74% of the energy used to produce them.

According to the data based on the US Census Data and Simmons National Consumer Survey (NHCS), 102.18 million Americans consumed canned meat in 2019. India, China, and Brazil are the countries where demand for canned food is expected to increase over the forecast period, thereby positively impacting the market's growth.

## **Aggressive Marketing**

Aggressive marketing strategies of beverage companies toward the usage of metal cans have also had an impact on the global metal packaging market. As canned beverages are being considered trendy among the youth, and ready-to-eat or semi-processed canned foods are considered convenient and economical among several global users, the penetration of canned products is increasing rapidly. In 2019, Jiaduobao, one of the leading Chinese producers of canned herbal tea, launched its drink in sleek cans. This is mainly done to attract customers who care more about their health and are choosing to consume healthy food and beverages.

# Canned Water and Sustainability Advantages

Metal cans are also gaining traction in the packaged water category. These cans offer sustainability advantages, and significant producers can be expected to continue to invest in developing technologies for beverage can production, light-weighting techniques, and improvement in can functionality. For instance, in 2019, PepsiCo had plans to sell Aquafina's purified still water in aluminum cans at US foodservice outlets. Additionally, increasing environmental policies and growing focus on recycling is augmenting the need for aluminum material. The focus of companies on

improving the eco-friendly brand image is further expanding the growth of the cans segment of the market studied.

# North America is Expected to Hold Major Share

The North American region accounts for a significant share of the metal packaging industry due to sustenance by the high concentration of consumer goods, manufacturers, and packaged goods manufacturers. Owing to this, the packaging industry in this region is well established. Stringent government regulations and standards are responsible for the increased proliferation of metal packaging products in the region. The massive consumption of canned food in North America is also responsible for the increase in the metal packaging industry's growth. Canada observes the effects of steel and aluminum tariffs on the craft beer industry.

For instance, according to the U.S. Census Bureau, approximately 214.07 million U.S. citizens consumed canned, jarred, or packaged fruit in 2019. Also, nearly 102.18 million U.S. citizens consumed canned meat in 2019. Moreover, most of the organic food consumed/preferred by the consumers in the United States are meat/poultry,



yogurt, and juices. The beverage segment constitutes many new specialty drinks, like energy drinks, being delivered in 8.2-ounce cans. According to the Beer Institute, American brewers fill and sell about 36 billion aluminum cans and bottles per year. These cans constitute 62% of the beer volume made and sold in the United States.

# **Increased Demand and Labor Shortage**

The United States reported witnessing a surge in demand for processed foods like canned soups and vegetables during the outbreak of COVID-19, affecting the metal packaging across the food industry's supply chain.

Metal container manufacturers were required to speed up production, but the labor remained a challenge. Crown Holdings, announced to increase production in the U.S. across 2020. Can we fix this sentence? The pandemic added urgency to the effort. The company initiated 81 open production jobs at its 25 U.S. plants, in place of third production line being set up at a factory in Nichols, New

York. Silgan Holdings has over 50 plants across the United States. The company reported an increase in first-quarter earnings in 2020, partly due to a jump in demand for cans.

## Recycling Contamination Significant

Most of the recyclers in the North American region face contamination, where the recyclable products are affected by the leftovers or unrelated wastes. This is a significant issue in Canada than in the United States. According to a prominent recycler in Ontario, Canada Fibers, if Ontario's average contamination rate reaches 27%, it may cost the recyclers an extra charge of USD 5 million, annually. Furthermore, according to Solid Waste Management for the City of Toronto, a decrease in each percentage point in the contamination of recyclable materials may lower the recycling costs in Toronto by USD 600,000 to USD 1 million, per year. **[FM]** 







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- A certificate of award endorsed by INX International Ink Co.
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- Press coverage in industry magazines
- The winning can will be on display at industry-specific trade shows; and will be featured on the INX website
- Exposure on INX social media channels with over 10,000 followers

#### SUBMISSION DEADLINE 4/30/2021

www.inxcancontest.com

## **Round Table Discussion**

# 3-Piece Canmakers: The Impact of COVID and the Year Ahead

Experts from the 3-piece metal packaging industry offer their perspectives on the impact of COVID and the year ahead. We asked them what has been the greatest impact or challenge the Covid-19 pandemic has had on their organizations, how they addressed it and what the future holds.

# Question: What has been the greatest impact (or challenge) to your business as a result of the pandemic?

#### Jim Peterson

There were countless challenges to our business as the COVID crisis expanded last March, from securing enough raw materials to the very real possibility that some of our customers might need to shut down for a period of time in order to meet changing health and safety requirements. All that said, the greatest impact of COVID on our operations was, not surprising, around our people. As we all know, the global pandemic created a significant spike in demand both for our food can and aerosol can business.

#### **Sunil Gidumal**

Orders, cancellation, delays, and not knowing when orders will be placed. Keeping staff at factories in China and Sri Lanka employed with no assistance from the Governments. Increased burden on testing staff at the cost of the factory. Meeting overhead costs. Order sizes coming in drastically reduced.

#### Thomas Palmieri

The greatest impact has been an increase in business and purchase orders. The DIY market has exploded with people working and spending more time at home. This allows more time for projects which has in turn resulted in higher demand for coating manufacturers. The demand on our production has increased challenging us to keep operating and learning how to keep our staff safe while still meeting the demand.

Jim Peterson CEO, Ball MetalPack





Sunil Gidumal Managing Director, GM Metal Packaging

Thomas
Palmieri
Managing Director
& Vice President
of Sales, Envases



Experts from the 3-piece metal packaging industry

# Question: What have you done to address the challenge?

#### Jim Peterson

In order to support our customers, we quickly moved to continuous operations in each of our plants which meant we not only needed to immediately initiate new safety protocols and processes for our existing team members but we also had to launch a robust hiring process in order to add the necessary crews across our system at a time when many were worried about even leaving their homes. We at Ball Metalpack are proud that our team quickly understood that as essential workers, we had a responsibility not just to our customers but also our neighbors

and wider communities in making sure that we as a society could quickly get food and household disinfectants back on store shelves. The most important lesson, as always, was to be fully transparent with our employees about both the challenges and risks in front of us. Not every decision we made was right, however moving quickly to address things that weren't working and quickly spreading "best practices" throughout our system were essential to building trust with our team. Ultimately, we were successful, as we did not lose a day, or even a shift, of production anywhere throughout our system during this challenging period. We are proud that the Ball Metalpack team stepped up and delivered when we were needed.

#### **Sunil Gidumal**

If staff leave, do not rehire. Shift staff around. Sending more EDM's out to people we met at trade shows to remind them of your ability, run sizes. Remind existing customers on stock levels and do they need small top ups with more on line business being done. Assisting customers with design touch ups and trying to reduce turn around.

# Question: What do you anticipate the pandemics influence will be on your medium to long-term business growth?

#### Jim Peterson

One longer term implication that COVID will have on our business, and the larger can market as well, are the changing consumer perceptions and buying patterns around some of our key products, including food cans, aerosol cleaners and spray paint. When it comes to food cans, we have seen consumer data that not only did current food can users expand their usage from weekly to daily but as important, we have seen a significant expansion of the number of consumers who tried food cans again for the first time in years. As a result, we have seen food cans, centered around their convenience and safety, capture a double digit demand spike that we expect to continue in 2021 and beyond. When it comes to aerosols, as we as a society were locked down, more and more home crafting was done, with an almost doubling of consumers using spray paint cans, which we expect will stick now that they see how enjoyable and easy spray is when used properly. Of course no detailed explanation needs to be made about the massive demand jump in aerosol disinfectants, as consumers and business

Continued on page 24

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# **IMDPA Membership Committee Report**

Recruitment and projects underway for 2021



John Hrdlick, Chaiman, Membership Committee

Our IMDPA membership committee has been working diligently since last fall. I am very fortunate to have a strong group of individuals working together to help update and improve our efforts to not only grow, but also to maintain our membership. I want to thank our committee members for their involvement especially as we began our

efforts as the holidays came upon us and the ongoing challenges with COVID. Elena West, John Friedman, Michael Masenior, Renee Schouten, Nick Hammer, Allan Sayers and Michelle Pack, *thank you* very much!

As we try to better attract the younger generation, we realized that more use of technologies will be required to accomplish that goal. Social Media, apps and our website will need to play a part in our recruiting efforts along with our typical approaches. During a time when the pandemic does not allow associations like the IMDPA to gather in person it becomes even more of a challenge to show why it is beneficial to join. One thing is for sure, the in-person networking is outstanding and normally the first thing members say they like about our organization. However, I believe our committee is making progress and I expect we will see positive results very soon that will culminate in our in-person conference in October.

The membership committee has been working on five key initiatives the past few months that are in process or very close to launching.

- A new recruitment letter has been drafted, edited a few times and is now ready to go. It can be used on social media and our website, but we are preparing a targeted recruitment mailer as well that should be ready in March.
- 2. A recruitment video has been produced that can also be used on social media, our website or as a link in the recruitment letter. A second video that will include various short interviews from members or past speakers is in the works now and we're anxiously waiting to see that become another deliverable.



IMDPA Membership is your Gateway to the Metal Packaging World #IMDPA

- 3. Because we are living and working during trying times our committee felt it was important for us to survey our current members on what they need or expect from our association. We want our members to remain engaged and learning from each other, continuing to benefit from being members of the IMDPA. Survey results are coming in and we look forward to evaluating the results.
- 4. We are planning the 2nd New Member Contest and hope that it will result in a dramatic increase in our membership. Look for that to come out in March or April and it will run for two months.
- 5. Our committee realizes our job does not end with helping new members to sign up. We need to provide personal care and follow up to ensure every new member is happy, engaged, and hopefully on their way to become future leaders of the association if that is their desire. The association edition of Growth Zone appears to be a very good tool that the IMDPA can make use of to manage the onboarding process of our new members. We already have use of Growth Zone so the committee will further discuss how to put it in action.

Hopefully, everyone can get an idea of how active our committee has been, and the results will be evident very soon. Feel free to contact me, or anyone on our committee, if you would like to be involved in this very important effort.

IM



## **IMDPA Events**



#### 2-DAY CONFERENCE

Over 300 industry members from around the world

**Industry** expert speakers from around the world

Latest developments in metal decorating and packaging technology

#### **2021 Industry Events**

#### Latamcan

September 22-24 Ciudad de México. Mexico

**IMDPA** Annual Conference & Golf Outing

October 5–7 Oak Brook, IL, USA **Canmaker Summit** 

October 2021

October 12-14 Prague

Asia CanTech

October 25-27 Bangkok, Thailand

# **IMDPA Membership**

#### Welcome! New Members

We are pleased to have the following industry personnel as new members of our Association and look forward to many years of participation in membership activities.

Alessandro Maloberti MW Lak Solutions

**Carol Traister** 

**Paul Dounian** 

BYK USA

Miltec UV

Nakash Vasaya

Maharashtra Metal Works

Mark Wilkins Acoma srl

**Peter Lockley** 

INX International Ink Co

#### **Volunteer Opportunities**

We have a number of exciting volunteer opportunities available on a variety of committees. We are happy to help you find something that meets your interests and serves your personal growth needs. If you are interested in joining a committee please email renee.schouten@inxintl.com

Golf

Newsletter

Decorators of the Year

Education

Membership

**Technical Resources** 

Social media Webinars

Website & Communications



Membership Drive WIN up to \$500 (through April 30) Amazon Gift Card

We believe that in every metal decorating and packaging business there are people who could benefit from an IMDPA membership. So, we're holding our Second IMDPA Membership Drive. Help the IMDPA recruit new members! www.conta.cc/3059pMf

Learn more



We are saddened to report the passing of Ivor Roberts. He worked at various metal decorating businesses including Vulcan Metal Decorating, Crown Cork & Seal in Canada, and Heakin Can/Ball Packaging in Cincinnati, Ohio.

**Membership Statistics** (as of March 1, 2021)

Members 435; Honorary, 25; Privileged, 21; TOTAL: 481

Interested in becoming a member? Join us! www.metaldecorators.org/membership/



#### **Article**

# Why Metal is the Package of Choice

Source: Metal Packaging Europe

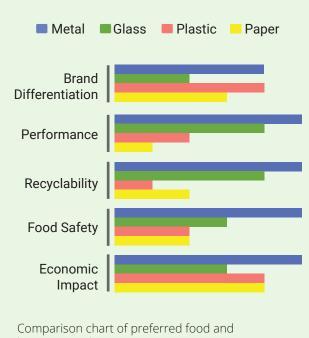
Metal is the material of choice for many beverage and food products.

etal is by far the strongest and most versatile materials available for packaging. They are infinitely recyclable and offer a combination of excellent physical protection and barrier properties. They're impervious to oxygen, carbon dioxide, and other gases, and liquids such as water. This results in superior shelf-life and preservation of the products packed in them. It's no wonder that historically the first metal packaging developed for food and beverage was intended for the tough requirements of military use.

## **Brand Differentiation**

Metal Packaging sets itself apart from all other types of packaging due to its strength, ability to extended shelf-life, and recyclability. And just as important, it allows brand owners of beverage, food, and innumerable consumer products to set their product apart. The science of metal decorating provides a "portable billboard" that is displayed on the grocer's shelf and at the point of consumption, be it a sporting event, a recreation activity, or just relaxing at home. The performance characteristics and recycling benefits of metal packaging convey a message of quality and concern. There's no better way to package a product.

# TODAY, METAL IS THE MATERIAL OF CHOICE FOR MANY BEVERAGE AND FOOD PRODUCTS.



### **Performance**

Think about it: Metal containers are made from the same durable materials as automobiles and aircraft! And that's reflected in the performance of the metal container. It endures high temperatures, allowing food to be processed for safety and extended shelf-life. It can be chilled at temperatures approaching freezing to provide refreshment and satisfaction. It is impermeable to oxygen or carbon dioxide to preserve the freshness of packaged products. Its durability and strength enable shipping over long distances without worry concerning leaking or damage. And consider that aluminum cans weigh less than many plastic containers and most glass containers. This means shipping aluminum containers is much more economical than shipping glass or even plastic.

## Sustainability

Aluminum and steel used for packaging can be recycled and used again for packaging infinitely. That's a lot! Infinitely more than plastic. Infinitely more than paper. And glass, well clear glass may be comparable, but if the glass is green or brown or blue, it can't be mixed in the container recycling stream and re-used. Because it can be used over and over again as another container or package, the rate of recycling for metal packaging is the leading recycled packaging material in most countries throughout the world.

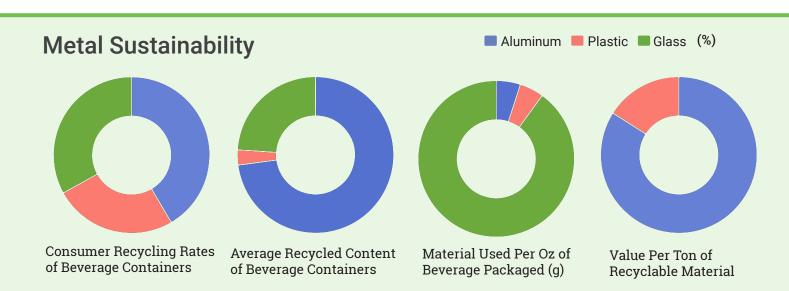
## **Food Safety**

Why was the metal container invented? Over 100 years ago Napoleon was looking for a container that would safely preserve food for the military. Nicholas Appert invented a method to preserve (or "can") food in sealed containers. A year later, Peter Duran invented a method of doing this in metal (tin) cans. So the metal can was then, and is today, a safe and effective way to preserve food and beverage products and below are the reasons why:

- Metal cans provide a complete barrier to light, gas, liquid, and light permeation
- They are the most durable package available—they're unbreakable
- They endure a wide temperature range, withstanding high and low temperatures
- Enables high temperature processing for preserving freshness and protection
- Products packaged inside metal containers have shelflives of several years
- Durable tamper-resistant package

## **Economic Impact**

The metal container is the package of value. When considering its many features and benefits, nothing else comes close to providing the value and economy of metal packaging. **[FM]** 



# Consumer Trends: Challenges and Tactics for Winning in Today's Environment

#### Erik D. Rosenstrauch - Followup to 2019 Chicago Conference Keynote Presentation

This article is a follow-up to the keynote presentation given by Erik D. Rosenstrauch, President and CEO of Fuel Partnerships, during the 2019 IMDPA Conference in Chicago, titled: "The Reality of Retail: Consumer Trends: Challenges and Tactics for Winning in Today's Environment".

IMDPA: Erik, your presentation at the IMDPA conference focused on the state of retail in an ever changing world of online pressures. You noted very clearly that retail was not dead and although there may have been some shrinkage in specific industries, that was offset by growth in others. Has the pandemic changed the speed of retail's demise?

**Erik:** Let's start with the obvious; pandemics change everything. What was true in January 2020, is not true today. While retail sales are still going strong for a variety of specific businesses, online sales have increased exponentially.

The third quarter 2020 e-commerce estimate increased 36.7 percent (±2.1%) from the third quarter of 2019 while total retail sales increased 7.0 percent (±0.4%) in the same period. E-commerce sales in the third quarter of 2020 accounted for 14.3 percent of total sales. (U.S. Census Bureau).

Of the many changes the pandemic has had on consumer shopping habits, the pre-pandemic belief that the local supermarket was on its last legs has been debunked. While we will continue to see the demise of the mall (the pandemic has accelerated that slow death), the local supermarket has seen a resurgence. Amazon and its like are growing across almost every category, yet traditional supermarket purchases remain firmly anchored to the local community store. Only a short 10 months ago, Amazon's 2-day delivery was considered a revolution in "just-in-time" fulfillment. Today, the demand is for delivery right now. Two-day delivery is no longer fast: now is fast and the local

Continued on p16



by 53% as more people selfisolated and worked from home.

Over 45% of consumers also used home delivery and a whopping 92% used click-and-collect options that let them pay online and pick up their purchases in-store or curbside.

Some industry forecasts predict that penetration will reach 10 percent in 2020, compared with 2 to 3 percent before the crisis. This will have significant implications for packaging design. Understandably, most of today's packaging has been optimized for traditional brickand-mortar requirements, not online shipments.

Steve Hornyak, "The future is now for online grocery due to COVID-19," Total Retail, April 20, 2020, mytotalretail.com; Nizla Naizer and Tiffany Kanaga, "What are you having for dinner?"

Deutsche Bank, July 4, 2019, dbresearch com-

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- Craft Cans
- Digital Printing
- Food & General Line
- Specialty & Fancy Cans
- 2-Piece Beverage Cans
- Miscellaneous Products
- Canmaking Innovation



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www.metaldecorators.org/excellence-in-quality



#### Interview: Consumer Trends...Cont. from p14

supermarket is able to meet that demand. And, not only do consumers want everything right now, they want the brands they are familiar with and they want everything to be fully sanitized and guaranteed safe.

"Amazon's 2-day delivery was considered a revolution in 'just-in-time' fulfillment. Today, the demand is for delivery right now.

But, even with the accelerated growth of online sales, 85% of consumer purchases are still happening in store.

# IMDPA: How will these new behaviors and consumer expectations influence packaging?

**Erik:** Most experts agree that the pandemic has only accelerated changes that were going to happen anyway. One of those changes that was experiencing a slow adoption rate outside of major cities is the use of instore shoppers and businesses such as Instacart. Buy online and pick-up in store (BOPIS) is no longer an option for a retailer. It is a required service. The big box stores and many of the larger supermarket chains had already embraced these services prior to the pandemic. Consumer demand, employee safety concerns and the simple will to survive accelerated the adoption of these services in smaller grocery stores and chains. Given this transition, packaging changes will be inevitable.

Consumers are making fewer trips to the store, but increasing their basket size when they do. Processed and canned foods have experienced a renaissance as have single-use bags. Consumers are filling their pantries with food that will last for months if not years. Packaging consideration needs to take this into account to appeal to this bunker-down, hunker-in mentality.

For those relying on BOPIS, or food delivery apps such as Instacart, manufacturers will need to reinforce brand identities, simplify SKU options and buttress their packaging for 'alternative' delivery considerations. Counting on a stranger to fill a grocery order will mean improving the on-shelf presence of branding and

potentially narrowing the number of SKU's to support simpler and faster identification when shopping for a consumer with very specific requirements. Additionally, reinforcing packaging so that it retains its integrity through an unsupervised shop and delivery, will also become more and more important particularly for delivery companies that pay individuals based on the number of people served in a given day. Whether extreme cold or heat, space issues, drop-off locations, and of course, sanitation concerns, all will need to be considered going forward where in the past, once the product left the retailer, the burden fell to the consumer. Now, if brands want to keep their customers for the long-run, they have to consider packaging integrity not only in shipping to the retailer, but from the grocery shelf, to the basket, to the car, to the home, and to the table.

It's an exciting new world out there and whoever figures this out first will be the winner. [FM]



The spark behind Fuel
Partnerships is President
and CEO, Erik D.
Rosenstrauch. Erik is a
proven industry leader with
more than two decades of
experience in consumer
products and retail
marketing. Erik's road to

retail marketing began at an early age in Harrisburg, PA. He learned the consumer buying process at the regional chain of clothing stores his family operated. It was on the sales floor that Erik developed his passion for shopping behaviors and became inspired to understand how brands engage with customers.



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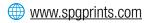
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# Scumming—The #1 Most Common Lithography Defect

# Symptoms, problems, and recommended solutions for troubleshooting scumming

By Jack Knight

In my travels around the world the #1 litho defect I've seen shared by printers is scumming. In this article I will identify symptoms, problems and recommended solutions for troubleshooting this litho defect.

## What is scumming?

In offset lithography, scumming is a generic term for the presence of ink on non-image areas of the printing plate, which can be caused by a variety of press conditions. The symptoms occur when ink randomly appears on non-image plate areas and scum cannot be washed off easily.

Before I recommend solutions, there are a few questions you need to ask yourself first.

- 1. Is the scum isolated to one press, multiple presses, or on all presses?
- 2. Does the scum appear at start up? Or does it appear during running?
- 3. Does the scum appear only on certain colors? Which colors?
- 4. Does the scum come and go or is it always in the same spot?
- 5. Do water sources matter and why?
- 6. Press start up... What do you look for?

# #1 Is the scum isolated to one press, multiple presses, or on all presses?

Scum can happen on any unit at any time when the ink and water balance is not in controled.

The ideal water temperature in the dampening system chiller tank is between 50 to 60° F. Warmer temperatures will cause scum; colder will result in poor ink lay down. If the dampening form roll pressure is not set to the plate at the correct setting, you will have scum problems. Check the setting between the water pan and metering rolls to insure they are set at the right squeeze.



# Has the dampening system metering roll been skewed throwing off the settings?

If the dampening system water pan roll is oxidized, then it will not carry the water evenly. Clean the roll with an approved water pan roll cleaner.

#2 Does the scum appear at start up? Or does it appear during running? The start up is key to making sure you have good ink and water balance, but it can be an issue during the run if that balance is disrupted. You will have scum problems if the ink form roll settings to the printing plate are not set correctly. Too much or too little pressure to the plate will cause scum. Using too much ink reducer in an ink to adjust the body will cause scum problems. Do not use any!

#3 Does the scum appear only on certain colors? Which colors? Ink companies perform a test on inks called water pick up. Each pigment will absorb water at different levels and absorption rates. There are known water pick up problems with certain colors all due to the pigment. Some printers like to add transparent white ink to colors on press. It is clear and is used to weaken the ink or extend it. Transparent white ink also likes water; do not use it with full strength colors. If you use it, you will have to increase the ink film thickness (density) to get your color. As you increase the density the water must be increased. As you increase both ink and water you will start fighting scum problems.

Be careful during ink roll wash ups to insure you do not get any wash up solvent into the dampening system. Solvent in the dampening system will cause scum. Check the conductivity in the water supply pan. If it is different than what is in the chiller then you probably have solvent in the pan. It takes a while for the pan to completely recirculate into the chiller

**#4** Does the scum come and go or is it always in the same spot? Check the ink rolls after a color wash up for wet spots. Wet spots mean solvent is trapped on the ink rolls and did not dry off. Ink roll settings are off if you see



this condition. It's also good to rinse the ink rolls with warm water after a color wash up to get any trapped solvent washed off.

**#5** Do water sources matter and why? Starting with a conductivity as close to zero as possible is the best practice before adding your etch and alcohol or alcohol substitutes.

Check the conductivity of the fountain solution after mixing it. The range should be at 1200 – 1800 micromhos to start with a maximum running condition of 2500-5000. Remember to use DI (De-ionized) water whenever possible to give you as close to zero micromhos starting point as possible. One gallon of plain reverse osmosis treated water should be approximately 40 micromhos. More fountain solution "is not better".

If the fountain solution supplier recommends you use 1.5 to 4.0 ounces per 1 gallon of water, then that's what must be used. I can't begin to tell you how important conductivity is in running a press. I recommend you change the fountain solution in the chiller tanks when the conductivity hits 2500-5000 maximum depending on your set parameters. Conductivity is more important than pH. All fountain solutions are buffered which means if you add more than the suppliers recommended amount the pH will not change; more is not better it is worse. As you add more fountain solution, the conductivity increases and, as the conductivity increases so does your solutions ability to keep the printing plate clean. Remember to check the conductivity meter's calibration before you use it.

Alcohol must be Isopropanol at 99%. Use no more than 10% at any time. The less the better. Alcohol is a solvent so it will reduce the strength of an ink. If too much is used your instinct will be to add more ink and then more water—leading to scum. Alcohol also drops conductivity—so measure fresh solution before you add any to get your real starting numbers. (Alcohol is still used in some parts of the world where they have not been restricted as they have been in the U.S.).

Do the press operators wash the printing plate with solvent? If yes, then it must be washed off with water. You do not want solvent in the press or on the printing plate. Do the press operators speed up the dampening system to clean scum off of the plate? If yes this adds a lot of water in the ink train and we are back to ink and water balance again.

#6 Press Startup...What do you look for? Wow! That's a lot to remember so let's get printing! Start the press to get the lay and color, when you are ready to print, ramp the speed up to operating line speed. After you print some sheets, look for a scum line along the front or gripper edge of the printing plate. No line means too much water, a wide line means not enough water, an even thin line means the ink and water balance is just right. It is more difficult to balance the ink and water on a wider press, so everything must be just right. There is a narrow window for ink and water control and remember to audit the plate-making department to insure they are gumming the plate properly. [FM]

#### **Scumming Recap**



#### **Symptoms**

Ink randomly appears on non-image plate areas, and scum cannot be washed off easily.

#### **POSSIBLE CAUSES**

- Conductivity
- Fountain solution is too hot in pans
- Ink or dampener rollers are set too close or too tight
- · Blanket is over-packed or too tight
- Contaminated wash-up solutions from prolonged use
- · Plate is not properly sensitized
- · Fountain solution is out of balance
- Wrong ink roller durometer (either too soft or too hard)
- Roller train temperature is too hot

#### RECOMMENDED SOLUTION

- Check pH; make sure it's in the correct range for your process
- Maintain fountain solution at 60°-65°F/15°-18C in press pans
- · Check and reset rollers
- · Check packing and re-torque rollers
- · Change to fresh wash-up solution
- Consult with pre-press department
- Drain pans and tanks. Refill with fresh fountain solution mixed to standard
- Check the recommended durometer setting, the condition of ink rollers
- Maintain 80°-85°F/26°29°C surface temperature on oscillators

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Tel: +1 909-898-3010

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#### **Trelleborg Printing Solutions**

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# [FUNDAMETALS]



#### Round Table Discussion, Cont. from p9

alike grabbed every can possible off the shelves. How long will this demand spike continue? No one knows, but with more new consumers of food and aerosol cans than at any time in recent memory, we are confident we will keep the vast majority of these new users as "can users" for years to come.

#### **Sunil Gidumal**

Reduce growth, look to reduce staff numbers and increase automation but at the same time keeping order volumes down. Get more business into the Sri Lanka factory to reduce impact of freight rates. Find new ways to attract new millennial buyers to tin packaging.

#### **Thomas Palmieri**

The Covid pandemic has resulted in higher than normal demand for our plant. While we expect the demand to

reduce a little over time, our plant has shown our current and new customer base that we encourage the growth. We have added new manufacturing lines along with jobs and opportunities to support the demand. We have been very lucky to do this during the pandemic and maintain a healthy factory at the same time. Our future focus is to continue growing by adding to our product line to support the US market in general line cans. The pandemic has shown us that buyers will need to develop their supply chain to allow for additional vendors. **[FM]** 

#### Let's keep in touch

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