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The Corrugator

OFFICIAL MAGAZINE OF FEDERATION OF CORRUGATED BOX MANUFACTURERS OF INDIA

JANUARY - MARCH 2023

New Exhibition Venue, New Dates!

WEPACK
WORLD EXPO OF PACKAGING INDUSTRY
世界包装工业博览会

WEPACK Series Packaging Exhibitions

SINOCORRUGATED 2023

July 12-14, 2023

National Exhibition and Convention Center (Shanghai)

SINO CORRUGATED
中国国际瓦楞展

Organiser **IKK**

The corrugated cardboard industry presents its ambition for Climate Neutrality by 2050



Industry Stalwarts Insights

K Arunachalam, Managing Director
- Eskay Cartons Pvt Ltd

With blessings of my Gurujji
Sri Chandrasekharendra Saraswathi Mahasvamigal,
the 68th Acharya of the Kanchi Kamakoti Peetam



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Printed at: Sai Offset Printers

The Editor's Page



Pulkit Shah



R Suresh



Shlok Kedia

We thank FCBM for entrusting us with this responsibility of the editors for our prestigious magazine. We are positive that our federation magazine will soon be counted amongst the most reputed industry magazine through-out the globe.

Although the e-commerce was booming in the last 4-5 years, the pandemic inadvertently gave it a big thrust eventually giving a boost to corrugated packaging products. Global online sales are expected to be over \$5.5 trillion in 2023.

The increasingly complex logistics chain for direct-to-consumer delivery e-commerce packages is expected to be handled up to 20 times or more during standard distribution - means there is a new demand for cost-effective secondary corrugated board packaging. Few of the trends impacting these changes are fit-to-product demand, sustainability, retail changes, advancement in digital printing to name a few.

Covid during its course had compelled us to limit our communicating, learning and working online. This year WICMA's 45th certificate course was a bit special as it went Hybrid (online & offline) with a great response from participants from diverse backgrounds. On 13th Feb 2023 with the course was inaugurated by Shri Vineet Jain, President- FCBM who made his first official visit to the FCBM Office, Mumbai.

SinoCorrugated 2023 scheduled on July 12-14, 2023 in Shanghai, China is eagerly awaited by our members, the Indian Corrugated fraternity and global industry at large.

In this edition we cover 2023 packaging trends for the coming year, climate neutrality by 2050, fit-to-Product Packaging, choosing Shipping Box Size, Shape and Strength, and make sure you do not miss our Back2Basics article every edition refreshing us through few basics.

Our annual conference last year CORRURISE 2022 got a great response and already we are eagerly awaiting the annual conference this year 2023 hosted by GCBMA at India's favorite vacation destination - 'Goa'. Next edition onwards, more details would follow suit.

Happy Reading-Learning-Growing !

President's Desk



Dear Friends,

The corrugated board packaging market was valued at USD 172.61 billion in 2021. It is expected to reach USD 212.32 billion by 2027, registering a CAGR of 3.6% from 2022 to 2027.

With paper prices stabilizing in last couple of quarters, and the FY 22-23 closing for corrugated box manufacturers seems to have sustained quiet well. However, shipping and e-commerce demand is slowing and traffic jams at ports are easing. But as supply chains even out, analysts now say a glut is forming in the supply of one material essential to moving goods: cardboard.

Globally, the recyclability and sustainability of the corrugated boxes are being more appreciated and hence utilized over other packaging materials. E-commerce, sustainability, fit-to-product and digital printing are few aspects that are making corrugated boxes lucrative and viable for packaging.

SinoCorrugated 2023 scheduled on July 12-14, 2023 in Shanghai, China is eagerly awaited by our members, the Indian Corrugated fraternity and global industry at large.

The FCBM annual conference host GCBMA's work is in full swing. We will soon be having blueprint of yet another memorable business-cum-bonding mega event at Goa in January 2024. Stay tuned for more details in the upcoming edition.

Jai Hind!

A handwritten signature in black ink, appearing to read 'Vineet Jain'.

Vineet Jain
President
FCBM

Industry Stalwarts Insights

**K Arunachalam, Managing Director
- Eskay Cartons Pvt Ltd**

With blessings of my Guruji
Sri Chandrasekharendra Saraswathi
Mahasvamigal, the 68th Acharya
of the Kanchi Kamakoti Peetam



Q: What are the three major challenges that you encountered in taking Eskay Cartons Pvt Ltd (ECPL) to the pedestal it is now? How did you overcome them?

KA: 1 Finding the right people at different levels was our biggest challenge that we faced in taking ECPL to the level we are now. The challenge did not stop with just finding, as it was equally challenging to retain them while ensuring that they were

making industry is as complicated as in any other industry, but this was seldom appreciated by the customers. Generally, the customers did not treat the corrugated box suppliers at par with their raw material suppliers and our team had to be content dealing with junior-most purchase officers assigned for procuring packaging materials. They would easily shift their business to our competitor if they received a quote, say 5% less than our price.



committed to the vision of the business. Our business is like a family, and as in families they can either work well together or become non-functional as each team member has his own personality and skill. The challenge is to find a solution to deal with different personalities, find out what drives them and act accordingly. We genuinely took care of their needs, treated them as family members and thereby had their loyalty. We have had very less employee attrition in the last two decades. Even those who have left for government job or overseas assignment are in touch with us, sharing their valuable suggestions.

2 Maintaining Customer loyalty was the second biggest challenge. Even today we find it very challenging. The production involved in a box

Due to mandatory factory compliance, things have changed for better as many senior executives visit our factory to ensure that all their compliance requirements are being met. The rapport with the customer is much better and the awareness to choose a corrugator who meets their price-quality-compliance requirement takes precedence over just the price.

3 Managing Change: The third biggest challenge was managing change. These changes were both gradual as well as transformational. When we shifted our business from manual to automatic, the change was transformational. With this major change, we also had to bring other changes gradually and this included changes in products, processes and workflow.

Q: With your rich experience of five decades please share how corrugated box manufacturers can thrive in any unexpected times like pandemic or economic upheavals.

KA: We always keep moving forward while being prepared for the uncertainty. The uncertainty as it suggests can arrive in any form like the recent pandemic or in the form of economic upheavals. The past has given us rich experience and the future though promising is full of uncertainty. We need to keep making adaptive changes in the present moment based on the experience gained so that the we are not overwhelmed by unexpected turn of events as we move towards



our goals. The key here is the 'rich experience'. We witnessed the floods in 2015, Covid in 2019 and these calamities have taught us many things and these teachings constitute

the 'rich experience'. However, if we fail to make use of our experience in handling the uncertainty that unfolds in the present moment we fail in our business. If we are continuously aware of the present moment, then we can make adaptive changes on a continuous basis based on our experience.

When we first faced issues with migrant workers during the pandemic, we consciously started automation of manual operation thereby reducing the dependency on migrant workers. Also, every businessman knows that catastrophe might befall the business at any time and it is his duty to be prepared for it. We have faced crisis in our business and three important factors that helped us in overcoming the crisis were our good will, sufficient reserves and surplus and the necessary confidence to handle the crisis.

There is always a space between stimulus and response and we need to think wisely in that space and respond to the situation. Reacting to every stimulus without using the space for responding wisely is the cause of failure in handling the situation.

Q: What are your business value systems that gives strength to your business? Please elaborate.

KA: The values should always be something that we truly represent. I see a lot of companies not

living up to their values. A multi-national company which was in news for wrong reasons have mentioned their values to

If we are continuously aware of the 'present moment', then we can make adaptive changes on a continuous basis based on our experience

be - Courage, Excellence, Equity and Joy. The stakeholders of the company should now be aware that this company does not truly represent the values supposedly be part of their integral system. There is a saying Yatha Raja Tatha Praja - As the ruler (does) so do the citizens. My personal values are the values of my organization that I represent. If I am dishonest, so will be my organization. As Buddhism stand on, Buddham, Dhamam and Sangham, for organization, it is the business owner, his principles and the organization itself.

The rise and fall of any organization or institution depends on the owner and his principles. In a professional set-up CEO/MD and the Board of directors replace the individual owner. For us the single most value system is Integrity that gives strength to our business. A great Tamil Poet Thiruvalluvar on integrity wrote "Those in the world (who) desire for fame, should shun the deed that dims their name". Every stakeholder in your business must be taken care. The customers, the employees, the creditors, the shareholders and the society at large have played a positive role in the growth of our business and it is my duty to be honest to them in serving their interest.

Q: Did you have any challenges with respect to the workforce? How did you manage them?

KA: We have had our own challenges with the workforce. The foremost was and still continues to be is the availability of workforce. There is a scarcity of male workers in Tamilnadu. This scarcity has been filled by migrant workers mainly from Bihar, Orissa, Jharkhand and West Bengal. There are several lakhs of migrant workers in our state of Tamilnadu. During the pandemic, we were one of the few companies who not only to have retained them but to have paid them their full salaries. We did not do this for any ulterior motive but with a deep understanding that the workforce is the integral part of our business and their welfare is the welfare of our organization. Even the women workforce coming from the neighbouring village took me by surprise when they thanked me

personally for having paid their salaries during the pandemic. Their families did not face any monetary problem unlike their neighbours who were working elsewhere. When the understanding deepens, and the vision widens, most of the problems gets solved automatically. This reminds me of a phrase in Rabindranath Tagore's Gitanjali, "Where words come out from the depth of truth" When you approach the problem truthfully, the stakeholders understand and cooperate with us and the same is true with the workforce. There is lot of politics over the migrant workers. When politics gets mixed with business, we need to be careful. We have commenced automation thereby reducing dependency on migrant workers. Afterall, a business is run for profits; any business which is not run keeping profits in view is akin to paving the road to hell with good intentions. Profits is therefore sine qua non for business and everything needs to be done to defend our profits without compromising our values.

Q: Where do you foresee the corrugated industry in the next 10 years keeping in mind the geopolitical issues, supply chain intricacies, raw material availability, and global competition?

KA: The only thing that is not changing is "change" and hence the only thing that we can depend on is "transformation". We cannot go backwards, and we cannot remain stationery. We need to be changing with times. Changes are happening so fast that we need to keep pace with the change. We need to keep an eye on the latest buzz words as technology is driven by these buzz words; for instance, buzz words related to climatic change (carbon footprint, Sustainability, Environmental-Social Governance, 3 Rs Reduce, Reuse and

Where words come out from the depth of truth

Recycle etc). Technology is getting redefined and reinvented.

There will be smart factories - factories that will analyse the way they work and make improvement to their processes.

We have auto plants available for all flutes and just not only for B, C & A. These plants come with a minimal change over time helping us perform more than 250 jobs in 12 hours without wastage. We need to wait and see how AI (Artificial

Intelligence) is going to shape our industry. 'Box on Demand' or 'Fit to Pack' is now seen as a solution by partners in the supply chain management. The traditional printing process has many disadvantages in terms of accuracy, poor colour quality and high printing cost; digital printing seems to be answer now. "Make in India" policy will have a positive impact on our country's economy. Every state is now vying with each other in making their state a manufacturing hub. This is good for us as the demand for corrugated boxes will increase.

The geo-political issues like Russia-Ukraine war and China's belligerence at India's doorstep are things that can have a negative impact. Also, the crisis in our neighbourhood countries is a serious concern. Sri Lanka's and Pakistan's Political and Economic crisis, Taliban regime in Afghanistan, influx of refugees from Myanmar are some of the geo-political issues causing concern to India and to the business community.

Q: Along with your five decades of Eskay Cartons' journey, how was your experience being an integral part of FCBM?

KA: My father late Shri A Kumaraswamy Pillai was one of the earliest SICBMA member. I joined SICBMA in 1979 and started attending FCBM conferences and meetings.

My experience being an integral part of FCBM is a 'learning experience'. My association with SICBMA and FCBM for almost four decades has taught me not only the nuances of corrugation business but also every aspect of management. I've gained a lot from FCBM meetings, from listening to conference speakers and from my countless tête-à-tête with FCBM members. Had I not taken active interest in the meetings & conferences of SICBMA and FCBM, I would have stayed like a frog in the well and my business wouldn't be at the level it is now.

I have never missed an opportunity to thank members (read mentors) of FCBM and SICBMA and I see this interview as yet another opportunity. I take this opportunity to thank all members of SICBMA and FCBM who have helped me with their knowledge and wisdom.



2023 packaging trends - what the experts predict for the coming year

Packaging industry predictions

A team of packaging experts detail the trends they expect in 2023

2022 was another difficult year to predict. Rising inflation, flagging consumer demand affecting eCommerce activity, and challenges with logistics have all affected businesses' and consumers' packaging choices.

But what are you likely to see in the coming year?

Packaging trends to expect in 2023 include increased focus and scrutiny of sustainability, cost reduction strategies and circular packaging solutions. Packaging experts also predict subtle branding being increasingly popular. External factors such as labour costs and supply chain issues could also influence packaging in the next 12 months.

The seven major packaging trends predicted for 2023

Taking all of the opinions together, there are seven clear predictions of packaging trends in 2023.

- Significant emphasis on sustainability.
- A growing focus on cost reduction.
- Innovation in eCommerce packaging.
- Subtle branding and printing options.
- Growth of interactive packaging.
- Shift to returnable packaging solutions.

The packaging experts at GWP detail why and how these trends are likely to occur, plus how your business can take advantage and mitigate any impact.

Packaging sustainability and cost pressures

David Mason | GWP Packaging Sales Director

David has been part of the corrugated industry for more than 30 years. This experience and

expertise make him an authority on various packaging-related topics and perfectly placed to provide predictions on what you are likely to see in 2023.

Growing emphasis on sustainability

A common thread across almost all businesses towards the latter part of 2022 was an increasing focus on sustainability. And this is only likely to intensify in 2023.

Businesses are placing significant emphasis on ensuring their packaging is sustainable. This changing approach is likely to see companies looking at size-optimised packaging to reduce emissions in transit, the increased use of recycled and recyclable materials, and even many considering reusable and returnable packaging options.

Besides this, companies are also increasingly looking towards solutions such as FSC® certified packaging.

Whilst this focus is in response to strong consumer demand, businesses genuinely seem to be waking up to their responsibility to the environment.

Interestingly, many sources also predict that true sustainability will begin to encompass many other facets (beyond just packaging and logistics), including ethical supply chains, fair workplaces and greater transparency.

Costs become a key focus

Historically, many organisations were guilty of focusing only on sustainability when times were good. The same businesses would more or less forget about sustainability during challenging trading periods and recessions.

As the UK and the wider world face a period of economic turbulence, it should be fascinating to

2023 packaging trends - what the experts predict for the coming year

see how cost pressures are balanced against consumers demanding more sustainable products and packaging.

Of course, the two can work together. Optimising the size of your packaging, for example, reduces costs through improved transport efficiency and less material use. Both these benefits also result in fewer CO2 emissions.

2023 could be the year when taking steps to reduce costs and improving sustainability go hand in hand.

Return ready mailers

The final prediction for 2023 is that of dual-use packaging. Particularly eCommerce shippers that businesses use for the initial delivery and any potential returns.

Although eCommerce growth is slowing, returns are still a huge problem for retailers and customers alike. Many online sellers are likely to believe that reducing friction for shoppers is a crucial way to foster loyalty and capture repeat business.

As such, packaging that allows for easy returns is almost certain to increase in popularity. Whether this is pre-printed return labels or double tear strips to allow for easy resealing, returning unwanted items could be about to get easier for consumers.

Innovation in eCommerce packaging

Jay Daggar | GWP Packaging Sales Manager

Jay is another stalwart of the packing industry, initially joining GWP in 2008. His close interaction with a broad range of different business types means he is uniquely positioned to spot emerging trends and customer priorities for 2023.

Slowing of eCommerce

It may seem strange to say that eCommerce may slow down in the coming 12 months. After all, in 2021, more than 81% of UK people made at least one purchase online. But with the UK facing its

highest inflation rate for 40 years, the cost of living crisis could cause severe headaches for both omnichannel and pureplay eCommerce businesses.

Another challenge for many businesses is the growth in Marketplaces. Big players like Amazon in the UK and Alibaba in China are slowly squeezing out smaller competitors.

But what does this mean for packaging?

Firstly, expect the unboxing experience to become even more refined (and competitive), with brands using this to create seamless online and offline experiences (and foster loyalty amongst consumers).

Secondly, how sustainable a company's eCommerce packaging is could also become a deal breaker. This advantage could be particularly pronounced where differing retailers offer similar prices and service. In short, packaging is likely to become increasingly important in winning and retaining customers.

Growth of interactive packaging

Another area where brands may look to enhance their packaging in 2023 is by making it more interactive.

Achieving this could include greater adoption of QR codes similar to how Lego, as one example, is already embracing this.

QR codes may also allow consumers to quickly download product instructions, setup guides, special offers and promotions, and even for cross and upselling similar products.

Packaging may also become more integral to specific product offerings, such as providing ongoing storage of items. This type of value-added packaging could become another point of difference in particular sectors.

Subtle branding

The final packaging prediction for 2023 is a shift towards more subtle branding.

This trend is already happening in specific markets, where brands are replacing full-colour, litho-printed packaging with one or two colour designs on natural-looking materials.

Companies are using this aesthetic to communicate increased sustainability of their packaging – and by extension, their business – by creating a more organic appearance. In many cases, this type of print also reduces production costs.

Labour and supply chain issues

Ruth Cook | GWP Group Managing Director

Besides Ruth's detailed knowledge of the packaging industry, her role as Managing Director of GWP Group also means she has an inherent knowledge and understanding of the broader business challenges likely to be seen in 2023.

Labour costs (and availability)

There has been much noise regarding inflation – driven primarily by material shortages and the conflict in Ukraine driving up energy prices. However, one of the key factors affecting price pressures is labour availability – and in turn, its costs.

Many businesses, including packaging suppliers and manufacturers, struggle to recruit and retain staff. The knock-on effect is that companies are willing (or sometimes forced) to pay higher wages to retain talent in their business. And this is before the increase in the minimum wage is introduced in April.

This increased labour cost feeds directly into the cost of products, including packaging. These costs inevitably are passed on until they reach the end consumers. So whilst material and energy costs show tentative signs of falling, labour costs are still pulling in the opposite direction.

The other consideration is that labour shortages can lead to inefficiencies and missed deadlines. As such, service levels of under-resourced

packaging companies could suffer moving into 2023.

Retention of key skills is a critical business strategy moving forward.

Ongoing supply chain issues

The potential for ongoing supply chain challenges ties in with increased labour costs. Lack of workers, ocean freight bottlenecks, inflation and warehousing shortages could all impact businesses' success in the next 12 months.

Of course, the packaging industry is not immune to any of this.

But, a more detailed analysis reveals that packaging may have to survive longer within the supply chain (an excellent recent example is Royal Mail strikes and scores of eCommerce packaging held in warehouses and depots across the UK).

Warehouse space is also likely to lead businesses to look at how their packaging can help with these challenges. The obvious solution here is a switch to a vendor-managed inventory.

The bottom line? Expect another challenging year in general for businesses.

Opportunities with plastics

Emily Parker | GWP Correx® General Manager

Emily has now been at GWP for almost ten years, gaining valuable experience in Correx, fulfilment and returnable packaging setups along the way. This knowledge underpins her predictions for reusable packaging trends in 2023.

Warehousing and fulfilment pressures

Although eCommerce activity may be falling from the peaks seen during the pandemic-affected years, this, conversely, could see additional pressures on warehousing and fulfilment.

With reduced consumer spending comes increased competition. In turn, short or even

2023 packaging trends - what the experts predict for the coming year

same-day delivery becomes a critical factor in shoppers buying decisions. If an online business does not have robust, reliable order-picking systems, it could quickly fall by the wayside. Consumer expectations could heap pressure on warehousing and fulfilment processes in 2023.

Another factor to consider is that stock levels can build up with fewer active shoppers. This scenario is a particular worry for slower-moving lines or those seen as a luxury or big-ticket purchases. Businesses must ensure sound management of this excess stock.

Shift to returnable

As sustainability grows in importance for most businesses, many consider switching to recyclable options such as corrugated cardboard. Whilst this is a good strategy in many scenarios, there are others where using returnable containers and tote boxes would be a better option.

The barrier many businesses are on the cusp of overcoming is that the simplistic view of plastics is that they are bad. But many organisations now understand that a plastic supply chain tote, used over 100s of trips, can result in less energy use and emissions than a single trip option.

Perception is the main factor holding this switch back - but 2023 could be the year this changes.

Plastic Packaging Tax

The Plastic Packaging tax was finally launched in 2022 - although to little fanfare.

Many businesses – including several packaging manufacturers – took a fairly relaxed approach to the new legislation virtually until its April introduction.

However, the tax has meant that manufacturers are adding more recycled content to a broad range of plastic packaging products and materials.

There is now some indication that this is beginning to drive up the cost of recycled material. So with businesses placing equal

attention on both costs and sustainability, it will be interesting to see if there is a swing back to virgin materials (simply due to the economics of the situation). As such, there may be further changes from the government in 2023 after monitoring the market's reaction.

Another factor to consider is businesses receiving increasingly costly bills for their tax. This point is when the reality of the amount of plastic packaging they are using hits home. Any increase in the tax cost could drive a further wave of businesses looking to reduce the amount of plastic they use in their packaging.

Specific sectors facing challenges

Richard Coombes | GWP Protective General Manager

Richard has worked in the protective case and foam packaging industry for over 15 years, including various roles at GWP Protective and its predecessor, Eastman Packaging. This experience makes him ideally placed to predict the packaging trends this sector is likely to see over the next 12 months.

Growth in specific sectors

The defence sector – a significant user of performance cases and foam inserts – is likely to be busy and face substantial challenges in 2023.

The ongoing situation in Ukraine could result in increased spending and activity in this sector, where packaging performance can often be mission-critical. Despite the economic crisis, defence spending in the UK remains above two per cent of GDP (gross domestic product).

Military personnel using protective cases.

Sectors such as defence are likely to see increased demand for protective packaging over the coming 12 months.

This increased demand could place strain on material supply and introduce additional cost pressures. Users of this type of packaging may only avoid these fluctuations if there are wider economic changes. Alternatively, other sectors

moving away from foam to what they perceive as more eco-friendly options may also soften any impact.

The year for more sustainability?

Regarding sustainability, the case and foam market is one area where sustainability has traditionally been less of a concern.

This indifference is due to a couple of factors. Firstly, businesses use high-performance cases and foam over long periods (i.e. they are not single-use solutions). Secondly, protection is of the utmost importance, particularly for high-value or specialist tools and equipment.

The industry is taking steps to address this, including several cases manufactured from recycled materials. There are reports of several new types of foam material coming to the market over the coming years too.

So whilst 2023 may not be the year that case industry becomes more environmentally focussed, it could be a turning point leading to accelerated change.

Economic challenges ahead

Ian Heskins | GWP Group Business Development Director

As one of the founding members of GWP, Ian celebrates 33 years with the business in 2023 (and even longer in the packaging industry). This wealth of knowledge and expertise in all things packaging makes his predictions for 2023 particularly interesting.

Material prices and availability

Over the past couple of years, material costs and availability have been among the main issues facing the packaging industry.

For example, the massive shift to eCommerce and changes in consumers' shopping behaviours led to shortages in corrugated cardboard (and subsequent price increases). Oil prices have pushed up the costs of plastic-based materials such as foam and Correx. And this is before considering wider inflation and the legislation

(Plastic Packaging tax) feeding into this too.

There is perhaps cautious optimism that 2023 could be the year when these price pressures begin to ease. The fall in eCommerce activity means that many material producers are likely to have spare capacity later in the year, resulting in gradually falling prices.

However, energy costs for manufacturing and converting these materials remain (at the time of writing) stubbornly high, which could offset some of the price relief. Despite this, 2023 could be when material prices and availability finally become much less volatile.

Manufacturing output

Another factor affecting the demand for materials is manufacturing output.

With the industry body Make UK indicating that manufacturing output shrank by 4 per cent in 2022, and forecasting a further reduction of 3.2 per cent in the year ahead, it could result in reduced demand for packaging across the board.

This reduced activity, of course, has a knock-on impact on packaging manufacturers and distributors. Suppliers are likely to come under pressure from customers to help with cost-reduction strategies and programmes. After the turbulence of the last couple of years, it appears that 2023 may well head the same way.

Summary

Packaging trends to expect in 2023

Predicting the future is difficult at the best of times, and this applies equally to the packing industry.

And whilst there are approaching challenges, there are also enormous opportunities for businesses of all types in 2023.

The result could – and should – be more sustainable, better connected, better optimised and more cost-effective packaging for your business.

Source: GWP Group

FCBM Beyond Packaging

Since the industrial revolution in the 1811 century, the world has moved forward technologically through mechanization. However, this has ushered in an era of pollution and ecological degradation. Fortunately, global society has now woken up to this reality, with the United Nations passing a resolution on March 2, 2022, to end plastic pollution.

Corrugated fiberboards, introduced a century ago in the manufacturing corrugated boxes, are known for their versatile characteristics and multi-purpose uses, as has been the trend in the

last decade. Its strength and properties are being utilized globally for the same- from beds in the Tokyo Olympics and over a few hundred thousand in India being used during the Covid-19 epidemic for hospitalization.

We present this brochure to enlighten society and the future generation of corrugators, to develop more products to replace the hazardous material and save our planet. The innovative products seen in this brochure have been developed by FCBM members.

New Markets Development Committee

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Sudarshan G. Chary

Sustainable Corrugated Board Products

1. Furniture & home décor Products

Bed, work from home desk, origami chair, desk chair, sofa set, table, stool, shelves, coffee table, utility desk, rocking chair, podium and more.



2. Utility daily product

Swachh dust bin, curtain, travel baggers, document storage organizer, serving tray and more ...



3. Emergency Use product

Emergency bed, emergency dry toilet, sanitizer stand.

World's 1st
Cardboard Hospital Bed
 With absolute Basic features of Hospital Bed

- Cardboard bed features: **LOW COST**
- Bed Size: 6' X 3' X 1.5"
- Withstand 250 to 300 Kg. Load
- Made from biodegradable, recyclable light weight cardboard
- Unique design of engineering
- Strong compact structure
- Easy to assemble
- Foldable, Transportable
- Laminated wall to protect from moping

Hospital bed features:

- Fix Footboard & Headboard pvc pipe
- Detachable side rail Guard pvc pipe
- Inclined tilted headboard 0-30 degree
- Influsion stand pvc & urine bag hanger
- Movable (Extra Feature)

EMERGENCY USE

Use of "EMERGENCY TOILET- BIODEGRADABLE" During Disasters like Earthquake



Use of Self-activated Micro-Operation Dry Toilet

o Toilet

Replaceable Biodegradable bags Placed in empty compartment for Urine

Replaceable Biodegradable bags Placed in empty compartment for Urine



FCBM Beyond Packaging

4. Children Learning products DIY

Utility toys, games, organizer, Origami chair, playhouse, storage

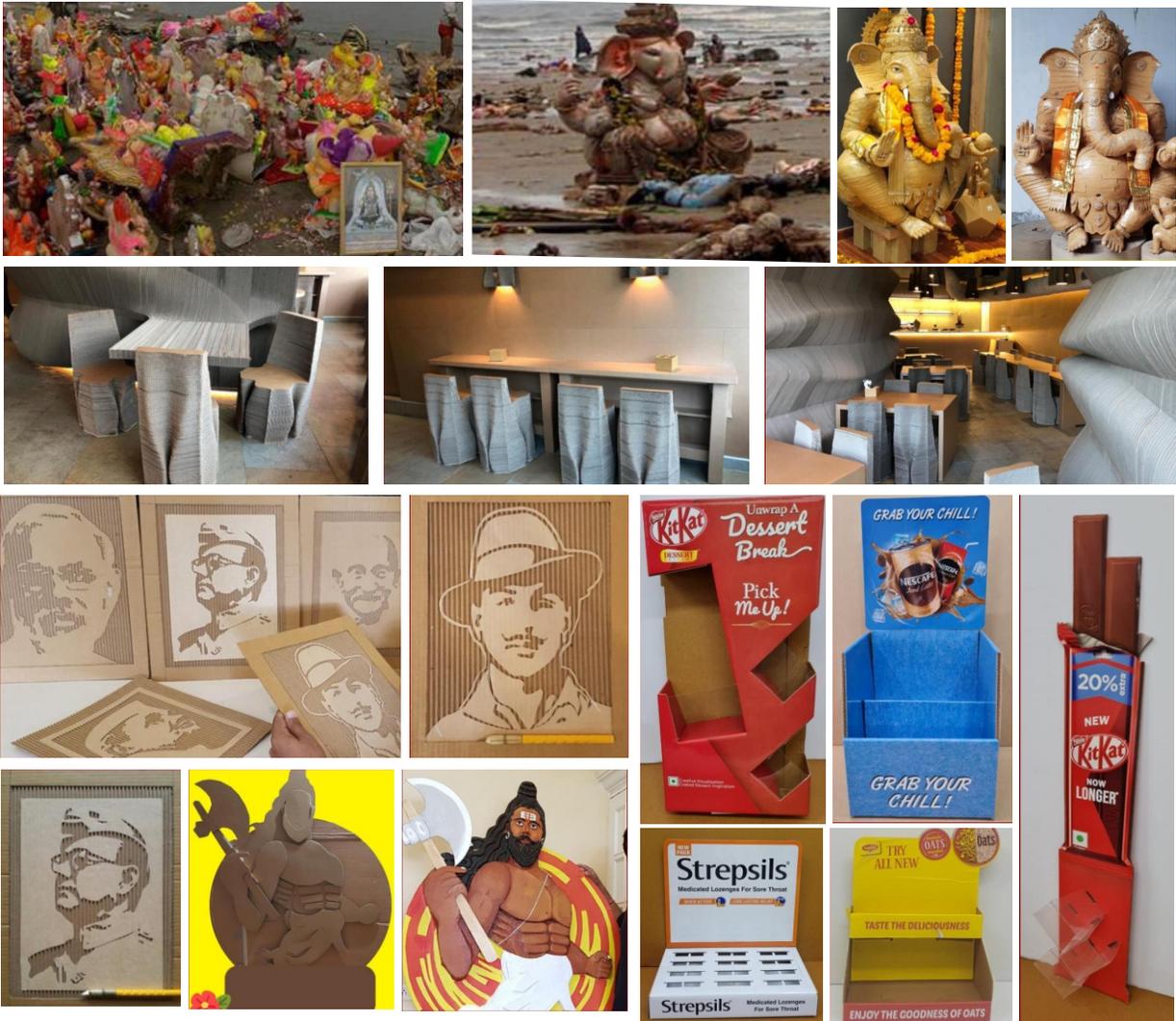


5. Educational Products

Geometry math concept, learning, 2D and 3D educational toys

6. Display and exhibition products

Product display, POP (Point of Purchase), Counter, Floor Display, Kiosk, Exhibition display set



7. Art, sculpture & Murals

Vases, 2D and 3D art, Murals, Creative Canvas

8. Fashion Display

Fashion show of corrugated board outfits for spreading awareness of eco-friendly products



9. Lamps & lightening product

Table lamp, ceiling lamp, wall lamp, floor lamp, vase lamp

10. Innovative Packaging

Extraordinary innovative packaging for launching new products

Solutions for common societal problems

1. Encouraging people to adapt sustainable, eco-friendly, lightweight furniture to reduce carbon footprint.
2. Provide sustainable, low-cost, lightweight, durable, emergency aid product immediately to the victim like emergency shelter, emergency dry toilet, Covid bed, Swacchh bin, and many others.
3. Providing children with a good hands-on learning education and art from an early age on environmental and conservation matters.

Insect resistant design | Low Cost| Reusable & recyclable | Auto-close flip | Removabe top lid

Strong Hexagonal shapre | easy to handle & assemble| Foldable

Size variations | Multi-color printing | 9 inch x 24 inch (w x h) hexagonal prism

100% disposable | 100% water-less dry | compact & sturdy | portable (900 gms)

User-friendly | waterproof coating | stackable | unbreakable

New Exhibition Venue, New Dates!



WEPACK 2023, Along with its series exhibitions SinoCorrugated 2023, Scheduled for July at National Exhibition and Convention Center (Shanghai)



New Exhibition Date: July 12-14, 2023

New Exhibition Venue: National Exhibition and Convention Center (Shanghai)

WEPACK 2023, along with its series exhibitions SinoCorrugated 2023, is scheduled to be held on July 12-14 at National Exhibition and Convention Center (Shanghai). WEPACK will emerge as a forward-looking, exploratory and influential super gala that covers the entire industry chain of packaging worldwide together with its seven exhibitions.

Set sail afresh to welcome visitors from home and abroad

As the exhibition organizer, RX(Reed Exhibitions) always prioritizes the health and safety of colleagues in the packaging industry. In order to

tide over the shock wave smoothly after China pivoted away from epidemic control policy, the organizer closely follows the policy trend, takes the needs of general customers as the orientation, assesses the situation, and rapidly adjusts the exhibition schedule and venue. Under the premise of ensuring health and safety of participants in the industry and resuming production of manufacturing industry in an orderly manner, WEPACK 2023 and its series exhibitions SinoCorrugated 2023 are formally scheduled to kick off on July 12-14, 2023 at National Convention and Exhibition Center (Shanghai).

New Exhibition Venue, New Dates!

The new exhibition venue and new date are arranged for a better reunion. We are grateful to the exhibitors, visitors and partners who have given us company, understanding and patience. We will bear in mind the shared trust and responsibility in the past 20 years. We will continue to keep close contact with the industry suppliers at home and abroad, packaging plants and all walks of life and update the latest news of the industry and exhibitions in time, in hope of presenting an efficient and high-quality gala event in 2023.

SinoCorrugated 2023, as a gala event in the packaging industry worldwide, will serve as a powerful platform for overseas buyers to release purchasing demand and rebuild purchasing channels by then.

Overseas associations, buyers and agencies who have been unable to participate on site due to the COVID-19 pandemic in the past two years are also pleased with the reopening and have proposed to the organizers to schedule the exhibition for July. For example, Corrugated



New dates in July to trigger more global business opportunities!

It is expected that more than 50 associations and 6,000+ overseas visitors from over 110 countries around the world will gather in Shanghai

As the world's second largest economy, China's relaxation of entry and exit restrictions will set off a chain reaction. A large number of overseas enterprises will come and seek business cooperation in China, releasing their blowout demand that has been inhibited for three years. WEPACK 2023 and its series exhibitions

Benelux Association (CBA), Asian Corrugated Case Association (ACCA), and Cámara Argentina de Fabricantes de Cartón Corrugado (CAFCCO), etc. all called the organizer to request that the exhibitions be postponed to July, so that they could have sufficient time to make a series of business travel plans and arrangements for visiting and purchasing in China, so as to participate in the exhibitions at ease and smoothly.

By then, it is expected that more than 50 industry associations and 6,000+ overseas visitors from over 110 countries around the

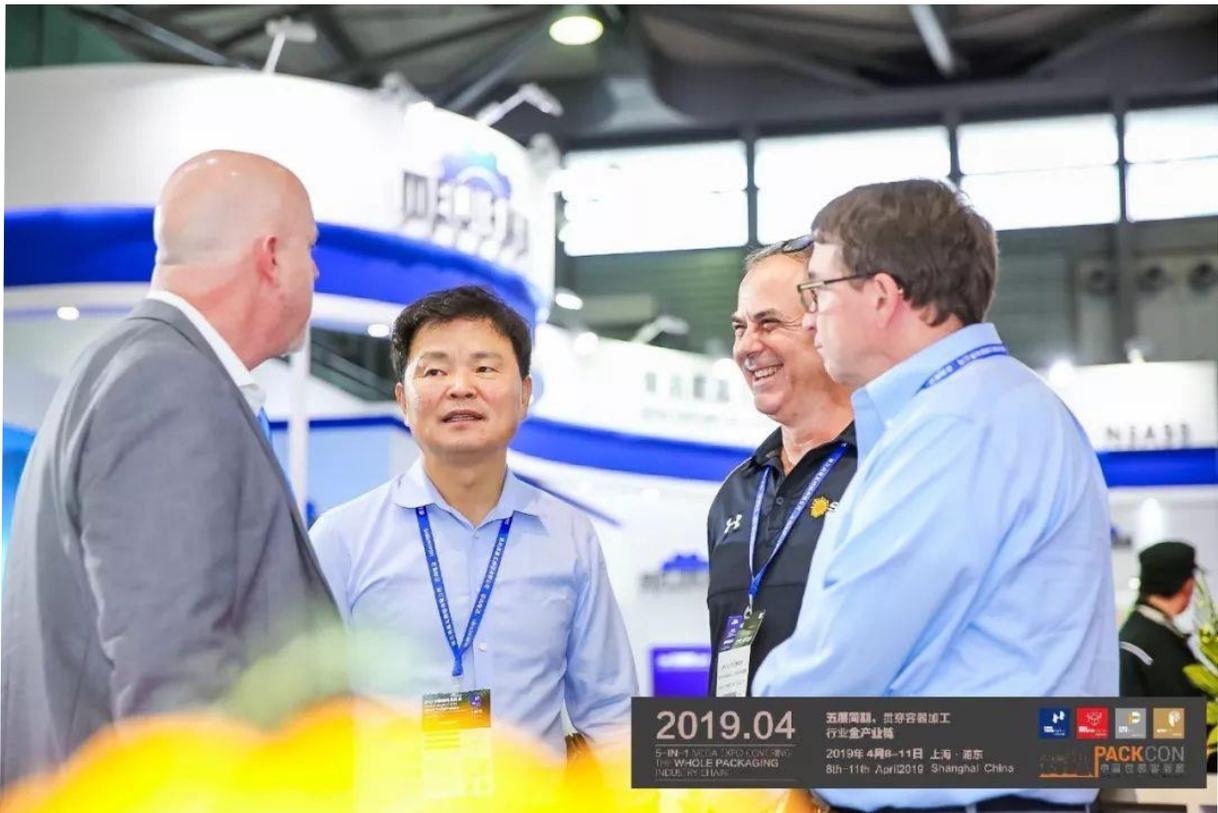
New Exhibition Venue, New Dates!

world will gather in Shanghai to participate in the gala event!

Six major overseas exhibition groups worldwide gather in Shanghai for the first time after 3 years since the outbreak of the pandemic

Since overseas pandemic prevention policies were lifted, international exhibitors who have kept close contact with the organizer of

created by SinoCorrugated, a global commercial platform. So far, nearly 50 overseas exhibitors and agencies from the United States, Germany, Italy, Spain, Japan, India and other countries and regions have submitted their participation applications to the organizer, and are working out specific booths plans and other matters. By then, the grandeur of six overseas exhibition groups will re-appear in Shanghai after the pandemic outbreak.



SinoCorrugated 2023 applied for exhibiting immediately—They booked the booths for July 2023, and queued up for the booth slots.

The brand awareness and influence of SinoCorrugated, an international industry exhibition, ripple through over 100 countries and regions, especially Germany, Italy, the United States, Japan and other traditional European and American carton equipment manufacturing countries. The exhibitors' participation not only aims at the Chinese market, but also targets the commercial value

China's economic recovery will take place in the second half of 2023

According to the prediction of experts from international authoritative financial institutions, China's economic recovery will be more vigorous and more enduring in the second half of 2023, and at that time Asia is expected to lead the next global economic recovery. Lu Ting, Chinese chief economist of Nomura, also believes that "China's GDP growth will also rebound significantly, especially in the second half of 2023, with an overall optimistic attitude towards 2023."

New Exhibition Venue, New Dates!

From the perspective of economic cycle, by July 2023, the Chinese market will hit the bottom and rebound, and opportunities for China's supply and world procurement will resurface. WEPACK 2023 and its series exhibitions SinoCorrugated 2023 held in Shanghai in July will pinpoint the window period of economic recovery. At that time, it is expected to attract more than 120,000 buyers with strong purchase power.

Avoid the peak of pandemic and ensure the safety and health of exhibitors and visitors

According to the current situation of the pandemic in China, Academician of the Chinese Academy of Engineering and expert in respiratory medicine, Zhong Nanshan speculated that the pre-COVID normal life could be restored in the first half of next year. In view of this, by July 2023, we can ensure that WEPACK 2023 and its series exhibitions SinoCorrugated 2023 can be held safely.

No matter from the policy level, the ardent aspirations of industry professionals at home and abroad, and the all-out protection of the health of industry practitioners, the exhibition scheduled for July 12-14, 2023 is the best choice for the community!

For new dates and exhibition halls, how do exhibitors re-secure their booths?

Up to now, more than 600 domestic and overseas exhibitors have confirmed to participate in WEPACK 2023 and its series exhibitions SinoCorrugated 2023, and now we need to reconfirm the floor plan and transfer to the new exhibition venue according to the scheduling rules.

Exhibitor registration and booth selection rules

- All exhibitors will choose the booth of the new exhibition hall according to the order of the original booth size from large to small.
- All exhibitors should choose the booth of the new exhibition hall according to the payment time of the original booth.
- The above two rules need to be met at the same time.

Note: Up to now, more than 600 exhibitors have confirmed the booths with WEPACK 2023 and its series exhibitions SinoCorrugated 2023. Please contact your exhibition service executive on participation. The sales representative will take the initiative to contact the exhibitors one by one to determine the booth matters. If you have any questions, please contact the relevant staff at any time.

***Winter will eventually pass,
and spring will surely arrive.
We will meet soon in July,***

WEPACK 2023, along with its series exhibitions SinoCorrugated 2023

*will renew the appointment with you in Shanghai!
and join a global gala that sounds the clarinet of the packaging industry*

The Rise of Fit-to-Product Packaging

When it comes to the CPG and SPA industries, we've seen trends driving packaging changes at quick rates. Just look at Amazon's contributions. On July 5, 1994, the small start-up began selling books online and shipping them to homes. Within five years, Amazon had expanded into many markets, pulling in a quarter of a million customers per quarter. After 25 years of business, the company is currently worth \$1 trillion and ships over billions of packages each year, significantly contributing to product packaging needs in the United States and worldwide.

To meet growing ecommerce needs and allocate resources more effectively, packaging manufacturers began thinking outside the box. In addition to creating more efficient packaging automation machinery, manufacturers have been striving to find creative packaging solutions that eliminate waste, save time, and preserve resources—without sacrificing the quality consumers have come to expect. Let's take a look at one alternative to standard corrugated boxes: fit-to-product packaging.

The Evolution of Product Packaging

Until recently, consumer packaged goods and other products were packed in perfectly square corrugated cartons, varying in dimension according to the contents. Not every product fits perfectly in a universal box, though. If a supplier carried multiple products or multiple sizes of products, they were forced to keep an inventory of box sizes on hand to fill orders. Not only does this method take up space, but it also uses up resources that might be utilized elsewhere.



In the pursuit of more efficient and sustainable packaging solutions, we've seen packaging vessels evolve from the usage of standard corrugated boxes to stand-up pouches, bioplastics, and paper options. But while waste reduction is quickly becoming vital, these types of packaging solutions aren't a good fit for every shape or size product.

Emerging Packaging Options

To accommodate more products and irregular sizes, new technologies, like FtP and box-on-demand packaging, have hit the market.

Fit-to-Product Packaging

Fit-to-product (FtP) packaging has quickly become a buzzword in the CPG and SPA community. By creating custom corrugated cases to the exact specifications of a product, FtP systems protect products during manufacturing, shipping, and transportation. They also eliminate the need to maintain an inventory of multiple carton sizes, since cases of any dimension can be built quickly

The Rise of Fit-to-Product Packaging

and easily. Moving forward, we expect to see increased demand for fanfold boards and printers that can work in FtP compatibility.

Box-on-Demand Packaging

Similar to FtP packaging, box-on-demand packaging allows products to be shipped in the smallest possible carton by creating the ideal size of box for every product. This type of custom packaging saves time and resources by cutting down on wasted space and reducing the need for fillers.

FtP and box-on-demand technologies are especially attractive to multi-channel brands, which sell a wide variety of products to a diverse consumer base. Although both of these packaging technologies are relatively new to the packaging industry, their use is quickly expanding as an increasing number of companies search for cost-effective packaging and shipping solutions. Only 7 percent of companies are making their cases on demand, but that number is expected to rise as already massive ecommerce brands like Amazon continue to grow. These technologies will—and already are—prompting large-scale changes across the packaging industry, bringing new challenges to brands, manufacturers, and marketers alike.

Market Implications Due to the Evolution of Product Packaging

A study by Peerless Research discusses how packaging optimization using FtP and box-on-demand technology ripples down a supply chain. When products are efficiently packed, the number of products packed per case can be increased. In turn, this affects the number of products per pallet and ups a truck's transportation capability. Not only does this method of packaging reduce overall shipping costs through consolidation, but it also saves time.

When Peerless Research asked distributors where their fulfillment pain points were, the top three answers included transportation, labor, and

Corrugate quantity reduction of 28%

A filling material reduction of 80-90%

20-35% savings more than conventional supply chains

Labor reduction up to 75%, including dunnage, packing, carton sealing, and taping

materials and packaging. While not every packaging investment is a smart one, supporters of box-on-demand packages report a number of advantages, including:

For packaging professionals, FtP packaging and other new trends may represent a shift in the CPG industry. To keep up with manufacturers who are already exploring these new approaches, even packaging professionals must be prepared to adapt.

Stay Ahead With the Right Packaging Partner

As evolving consumer trends continue to drive packaging changes, having the right packaging automation partner is key to remaining competitive. At INSITE, our cutting-edge case erectors and case sealers are designed to simplify packaging and streamline your production processes. Contact us today to learn more about how the packaging professionals at INSITE can help you stay at the forefront of the secondary packaging industry.

Source: INSITE Packaging Automation

The corrugated cardboard industry presents its ambition for Climate Neutrality by 2050

FEFCO (the European Federation of Corrugated Cardboard Manufacturers) is delighted to announce the launch of its Climate Neutrality Roadmap conducted by Climact.



In a context where consumer awareness and expectations around packaging are rising, and where climate change is becoming a major concern, FEFCO is proud to present the corrugated cardboard sector's plan to achieve climate neutrality by the year 2050.

This work responds to the EU Green Deal goal to cut greenhouse gas emissions by 80-95% by 2050. The European corrugated cardboard industry is circular by nature and has always been committed to sustainable growth. This impressive new ambition reflects its continuous efforts to preserve the environment and reduce GHG emissions.

Building on past achievements and thorough analytical work, the roadmap describes how the corrugated cardboard sector is committed to achieving climate neutrality. It lays out key milestones, the most plausible scenarios, the required investments, and the necessary policy measures to reach this goal.

The key findings show that the corrugated cardboard industry can reduce its carbon footprint emissions through actions directly within its control by 2050 compared to business as usual (BAU):

- Improvements in material efficiency and circularity that would reduce the footprint by 3,3 Mt CO₂eq. (or 19%) by 2050 compared to BAU; and
- Further improvements in energy efficiency and decarbonisation of the energy mix would reduce the footprint by an additional 2,8 Mt CO₂eq. (or 16%) by 2050 compared to BAU.

Looking beyond direct action, collective engagement of the wider value chain will enable corrugated cardboard to become carbon neutral and even carbon negative. Notably, the bulk of the reductions must be achieved upstream, and, in particular, by reducing the climate footprint of paper production.

Reduction of the paper sector (fossil) carbon footprint by 80% by 2050 (in line with the current paper industry roadmap) will allow the corrugated cardboard sector to achieve climate neutrality. Furthermore, if the paper sector fully phases out its fossil emissions, the corrugated cardboard sector would become a climate negative packaging material.

The ambitions of the corrugated cardboard sector's Climate Neutrality Roadmap can only be achieved if the following enabling conditions are met:

- A predictable and stable regulatory framework to steer investments
- The availability and affordability of climate-friendly energy carriers
- An adequate and robust energy infrastructure
- Policies and measures to enable the decarbonisation of the paper sector
- Policies and measures to enable the decarbonisation of the transport sector

- Recycling policies to improve quality of waste streams

Alex Manisty, Chairman of the FEFCO Climate Neutrality Roadmap Steering Committee, highlighted that “The roadmap reflects a credible plan that can be implemented in the required timeframe, and shows the strong will of the industry to build a climate neutral future for corrugated cardboard. Already the most recycled packaging material, with 88% recycled content, climate neutral corrugated cardboard will enable sustainable global supply chains for the long-term.”

“Climate neutrality by 2050 is the way that the European Commission foresees its future growth strategy. The FEFCO Secretariat considers it a duty to guide and assist the corrugated cardboard industry to enable climate neutrality in its manufacturing operations” said Eleni Despotou, Director General of FEFCO.

Source: Paper Desk



Johan Danielsson is new President at EMBA Machinery AB in Örebro, Sweden

EMBA Machinery AB in Örebro, Sweden, has appointed Johan Danielsson as President, effective January 9, 2023.

Johan has a long background from ABB and Hitachi Energy, working in various positions.

Prior to this, Johan held the role of Operating unit Manager in Hitachi Energy, running two factories – one in Ludvika, Sweden and one in Przasnysz, Poland.

Johan will report to Mr. Anders Berg, Chairman of EMBA Machinery AB and founder of the Berg Group.

EMBA Machinery AB is a leading supplier of converting machines for the global corrugated board industry. Product development, manufacture and marketing takes place from a customer-oriented perspective. The company was founded in 1954 and has today 250 employees. The main site is located in Örebro, with sister companies in USA and Germany. EMBA Machinery AB is part of the Berg Group.

Read more at www.emba.com



Packaging is more than packing a product and delivering it to consumers



Yuvraj Shah,
Son of Chetan Shah,
Director - Akshar Printing &
Packaging Works Pvt. Ltd.

Packaging is more than packing a product and delivering it to consumers; It is about creating an experience for the users." - This is one of the many unheard facts I learned about packaging in my 101 classes, but I emphatically realized this very recently. In the last week of October, before the frenzied Halloween weekend, I was fortunate to witness the buzz in the 'Global' Packaging Industry at PACK EXPO International.

To start with, it was hosted at the biggest convention centre in the US-McCormick Place in Chicago, IL, covering over 1.2 million net square feet. Considering the pandemic, the industry truly came back together after 4 years in a big way at the 4-day long conference. The show convened over 44,000 attendees, surpassing the 2018 event, with 2,200 exhibitors showcasing ground breaking packaging and processing innovations.

As part of the MSU School of Packaging I attended the conference for two days, with a cohort of about 80 students in total along with faculty and advisors to guide us at every step. A big shout-out to MSU Packaging Alumni Association for all the support, and the professionals who took out their precious time to guide us at the conference. As a young professional in the industry and a first-timer at a huge packaging conference, this was a crucial moment involving exploring, learning, and envisioning my future as part of the industry. The connections made are going to be a dominant factor in my futurist network in the industry. Moreover, after the sites visited on the floors, observing actual pieces of machinery demonstrating various stages of the packaging, and then joining the dots with in-class theories to practical applications in the real world was an extremely novel understanding of my concepts and ideas related to the field.

In crux, this was an unparalleled and highly rewarding exposure and I hope to be part of future conferences down the line to keep broadening my horizon. Packaging is one of the few spaces, always improving, expanding, and recreating ideas to be at par with sustainable and innovative solutions for all other industries globally.



Top 18 Kraft Paper Properties You Should Know

Firstly, we will come to a simple understanding of Kraft Paper, Kraft paper has environmental protection, recycling, cost saving, and other characteristics, with the entire international market on the packaging environmental protection requirements are increasing, Kraft paper with high strength, environmental protection, etc. property, has become the preferred material for Kraft paper box packaging. And Kraft paper also has a feature, in the customs when the Kraft paper packaging materials do not need to provide additional testing.



Excellent characteristics of Kraft paper

Kraft Paper as a packaging material, it is certainly necessary to have high-strength compression performance, because many products are to be transported by logistics, and transport process is very easy to appear some packaging problems, subject to a certain squeeze, the folding resistance, toughness of Kraft paper are very good.

And Kraft paper packaging in some industrial and agricultural can also be used, such as cement bags, fertilizer bags, these packaging used Kraft paper with high load, high strength, and has a certain degree of breath-ability. Of course, in the food industry packaging Kraft paper is also very popular, food grade Kraft paper performance is very superior, not only with moisture-proof or waterproof, and oil immersion, low temperature freezing, long expiration period and other characteristics. And compared to plastic, glass and other packaging materials, in the performance difference is not much, but the cost of food-grade packaging Kraft paper is much lower than the general packaging materials.

And food grade Kraft paper can be recycled and reused. Compared with bleached white paper, Kraft paper properties have many unique advantages. For

home food packaging, such as barbecue food or homemade food, the Kraft paper Natural Brown color makes the packaging look warm and nostalgic. For example, a wooden style decoration rustic steak restaurant, takeaway food packaging with Kraft paper, even if not in the restaurant can also feel the style of the restaurant. The unique appearance of Kraft paper alone is also more prominent than the overall white packaging.

Food grade Kraft paper for food packaging.

In Kraft paper products there is a special needs of Kraft paper, that is food packaging Kraft paper, benefiting from the national attention to food safety, as food packaging materials the food packaging Kraft paper market demand continues to be increased, products continue to standardize, food packaging Kraft paper is currently characterized by almost all the use of full wood pulp production. As use of recycled pulp and can reach the food packaging Kraft level of the product has not yet appeared on the top of the market.

Food grade Kraft paper with more environmentally friendly properties than plastic and other packaging. Its performance is also very superior, moisture-proof waterproof, anti-oil immersion, low-temperature freezing, can delay shelf life and other substances. You can buy anti-oil Kraft bags for food packaging from our store. The cost of food-grade Kraft paper is relatively lower when the barrier effect is the same compared to packaging materials such as plastics and glass.



Food packaging Kraft paper currently mainly has yellow Kraft paper and white Kraft paper two occupy the main market share, the current market of such products are mainly concentrated in the quality of standards and testing reports are not complete features, but the use

Top 18 Kraft Paper Properties You Should Know

of food Kraft paper customers are mostly to pick up foreign orders users, and such customers often need food-grade reports more complete. So at present, the domestic food packaging Kraft paper production enterprises need to improve their own depth in the detection report, now different countries will require Kraft paper manufacturers to provide different food grade testing reports, such as the export of food-grade printing and packaging products in the United States will ask for FDA reports, And as a junior SGS report has been unable to meet the current market demand.

An important test index of food grade white Kraft paper properties are the content of fluorescent agent, the content of which is too high will be harmful to human health. Because without adding brightener, the whiteness of white Kraft paper is very difficult to achieve high whiteness. In order to achieve this whiteness, many Kraft paper manufacturers will add a large number of phosphor as a brightener in production. But phosphors are harmful to the human body, and long-term exposure can be a cancer-causing risk. Therefore, in the food packaging industry is absolutely forbidden to use the addition of phosphor white Kraft paper.

So what simple ways do we have in our daily lives to quickly detect whether the fluorescent content of white Kraft paper is exceeding the standard, and we can use these simple methods.

1. Use a currency detector to detect. This is a relatively quick and easy way, is that we will UV function of the currency detector directly to white Kraft paper irradiation, and then slow movement, if there is a clear fluorescence phenomenon, it shows that the white Kraft paper product fluorescent content is seriously exceeded, cannot be used in food packaging.
2. Sunlight irradiation method, the method of low accuracy, because the sun itself contains ultraviolet light, if you can see fluorescent substances, but also that the white Kraft paper fluorescent agent exceeded the standard. This method is said to be less accurate because if we can see fluorescent substances in the sun, it shows that the white Kraft paper product fluorescent agent has been seriously exceeded. In fact, sometimes fluorescent agent content exceeding a certain range we can not see in the sun, so it is generally not recommended to use this method.
3. Naked eye observation method. The so-called naked eye observation method is that we directly look at the whiteness of white Kraft paper. Generally speaking, the whiteness of food grade white Kraft paper is relatively low, even some yellowish. If the white Kraft

paper on your hand is as white as the A4 copy sheet, it goes without saying that this white Kraft paper can be clearly judged to be non-food grade.



Color classification of Kraft paper

1. Natural color Kraft paper is brown, color is relatively dim, its surface impurities are also more obvious, generally used as the outer layer packaging, mainly play a dust-proof, moisture-proof, shockproof effect.
2. Single-sided smooth Kraft paper, on the basis of the original sheet, has a face through the original pulp coating processing, coating this side of the surface smooth and bright, yellow-brown, can be printed color. And the other side is basically the same as the original color Kraft paper, there are impurities.
3. Double-sided Smooth Kraft paper, full wood pulp Kraft paper, two faces are relatively smooth and bright. Color brown can be printed multi-color, both sides have a full wood pulp coating, has toughness. Belonging to high-grade double-sided box board paper, imported double-sided Kraft paper generally with some physical characteristics are better than domestic.
4. White Kraft paper is a double-sided white Kraft paper, can be divided into domestic white cowhide and imported white cowhide. Generally speaking, white Kraft paper is also divided into white and ultra-white, ultra-white sometimes called high white Kraft paper. According to the performance of the paper in detail divided down and flame-retardant white Kraft paper, high-humidity strong white raft paper, waterproof white Kraft paper and non-ash white Kraft paper. For some packaging printing products, can also be drenched film, paper lamination, embossing, dyeing processing food grade and so on.
5. There are two kinds of yellow Kraft paper, one is two face color is pure bright yellow, that is, refined Kraft paper. The other is a double-sided yellow Kraft paper with stripes. Both of these types of paper belong to high-grade Kraft paper, the price is relatively expensive.
6. Black Kraft paper, gram weight lower black Kraft

Top 18 Kraft Paper Properties You Should Know

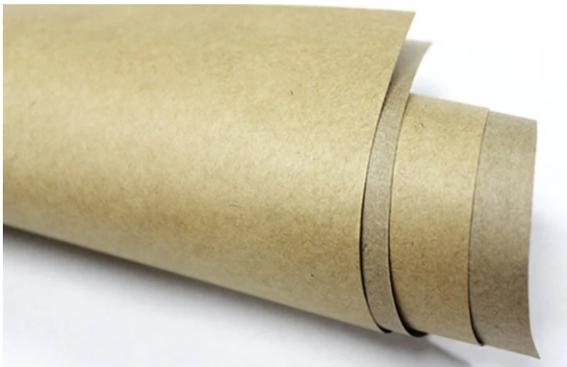
paper, gram weight higher called black Kraft cardboard. Also divided gray bottom single black cardboard, single-sided transmittance darker cardboard, double-sided transmittance darker cardboard, all wood paddle black cardboard.

Suitable for photo albums, photo frames, gift boxes, jewelry boxes, mobile phone boxes, shoe boxes, stationery, clothing tags, notebooks, desk calendars, handbags and horn speakers electronic gaskets and handicraft packaging etc. You can see the post Top 10 Kraft Boxes Types and Advantages.

Kraft paper color differences caused in production

We all know that Kraft paper is made of wood pulp, part of Kraft paper is made of all wood pulp, the other part of Kraft paper is made of recycled pulp. This is the basic one of properties. Whether it is all wood pulp made of Kraft paper or recycled pulp made of Kraft paper, after the finished Kraft paper came out, each batch of Kraft paper will always have a color difference.

So people notice why the color of Kraft paper in different batches is different, why this happens, in fact, the reason is very simple, because the production of Kraft paper raw materials can not be completely on the same tree material. So the production batch is different, the production season is different, at the same time the production machine is also different, so they produce the Kraft paper each batch will not be the same. Then this situation, will lead to Kraft paper color will have some deviation, but the impact will not be too large, good manufacturers produced Kraft paper color in each batch can reach 99% consistent.



White Kraft paper and Brown Kraft paper difference.

White Kraft paper is a kind of Kraft paper, Kraft paper is divided into brown Kraft paper and white Kraft paper, white Kraft paper can mainly be used for printing, there is a certain whiteness, many printing plants will

apply this kind of paper to print, and brown Kraft paper is generally used for packaging more. It may be asked, what is the difference between white Kraft paper and ordinary brown Kraft paper, in addition to color? In fact, many aspects can be used as a comparison, the above mentioned that the color and use are actually different, and their production materials, it is certainly not the same. Ordinary brown Kraft paper is generally made of wood pulp. White Kraft paper is made of bleaching wood pulp, its core, bottom pulp are made of color wood pulp, so that's the difference between them.

White Kraft Paper food Packaging has many advantages, the specific summary of white Kraft food Packaging is more in line with health, environmental protection, more economical cost savings etc.

White Kraft Paper Packaging for food is more environmentally friendly. White Kraft paper is produced by full wood pulp production, food grade white Kraft paper usually comes from artificial forest farm, rather than natural forest farm, because artificial forest farm is usually the use of artificial forest and sustainable regeneration, and white Kraft paper can be fully recycled and reused.

Economical cost savings. White Kraft paper as a food grade packaging Kraft, affordable, in the conversion of packaging will not increase the cost of packaging, is a more ideal packaging used.



Eco-friendly Recycled Kraft paper.

We know that Kraft paper is environmentally friendly packaging, one is because Kraft paper can be recycled and reused, and the other reason is that some Kraft paper is made from recycled waste pulp environmental-friendly Kraft cardboard. The main difference between recycled Kraft paper and ordinary Kraft paper is in raw materials. Recycled Kraft paper is made of recycled pulp, while ordinary Kraft made of original raw wood pulp. It is precisely because recycled Kraft paper uses recycled pulp, and recycled pulp

Top 18 Kraft Paper Properties You Should Know

often contains a large number of impurities, so in physical Kraft paper properties and quality of recycled Kraft paper than the original wood pulp Kraft paper is slightly weaker. Some recycled Kraft paper printing will also appear "drop powder" phenomenon. Therefore, in the market on the packaging performance and safety and hygiene requirements are usually use of original wood pulp Kraft paper, while the general packaging used to use recycled Kraft papers. Recycled Kraft paper products are not because the use of raw materials used waste material is not high-grade, in fact, recycled Kraft paper on the grade is also divided into excellent grade, A class, ordinary level three levels. Highest level of recycled Kraft paper to meet the packaging needs of high-end products. However, from the standpoint of environmental protection, recycled Kraft paper will use recycled pulp two times, greatly reducing the excessive use of forest resources. And because it is the use of recycled pulp, so the price of recycled Kraft paper is also cheaper.



About the weight of Kraft paper (grams per square meter)

When it comes to Kraft specifications of weight, if not a paper producer or often dealing with paper people generally do not know what is the weight of paper, and sometimes some customers say they need to buy Kraft paper, I asked him how many grams he needs, he does not understand what I mean, I will change the way to ask, how thick of the Kraft paper do you want? In fact, the weight of paper refers to grams per square meter of the paper, the easiest way is to cut Kraft paper into one meter multiplied by a meter of the specification, said, the weight called out is called grams is also called gram weight. In fact, G/SM is only a measurement method, and has nothing to do with Kraft paper properties and quality. The thickness of Kraft paper with different gram weight is also not the same.

The grams of Kraft paper can be measured by micrometer or caliper or measuring instrument, etc.,

you can also use the hand rubbing this piece of paper can also probably know the thickness of this piece of paper is also how many grams. The thickness of Kraft paper depends on paper weight, the higher the grams, the thicker paper, to buy Kraft cardboard as long as applicable for your product, do not care much about the thickness of papers.

If the use of thin Kraft paper, sometimes to produce packaging products hardness is not enough, it means that it can not be in the printing process to maintain a smooth, and then affect the production efficiency of the printing plant, but also affect the printing quality. The thinner the paper in printing will reduce the production speed of the printing press from 14,000 printing/hour to 10,000 printing/hour, so that the production efficiency of the printing plant will be reduced by 30%, so the specific use of thick paper is based on the characteristics of what you do is not the thicker the better or the thinner the better. Printing well-performing Kraft paper, can ensure the smooth running of printing, papers must have sufficient hardness, printing out the effect to meet customer requirements.



Personalized Kraft paper food packaging is the transmission of brand concept.

Personalized Kraft paper food packaging can promote the transmission of brand ideas. As consumers in the store to buy food, in the case of not knowing the taste, often choose to buy those with attractive product packaging, and the use of personalized food-grade Kraft paper packaging often gives people a unique visual effect, and easy to attract consumers' attention.

In addition to personalization, food packaging is more safety-conscious than general packaging, it is necessary to ensure that food packaging Kraft paper and food contact non-toxic. For such reasons, all food packaging put forward higher requirements with Kraft paper. And packaging conveys not only "attraction", but also a brand and concept. For brands, a good packaging (such as the use of personalized Kraft

The key trends moulding the future of packaging

Ryan Ellington explores the top ten trends shaping the future of the packaging industry.

As we move forward from the global pandemic the packaging industry has evolved to adapt to consumers' new attitudes as well as new ways of doing business.

The packaging industry faces both new and ongoing challenges. Here, Packaging Gateway

direct-to-consumer (D2C), eCommerce, environmental social governance (ESG), health and wellness, online food delivery and robotics.

GlobalData analyst George Henry told Packaging Gateway exclusively that he believes COVID-19, online food deliveries, ESG and advanced



explores the key trends moulding the future of the industry in 2022 and beyond.

Packaging Gateway's parent company, GlobalData published a report on 31 March titled: 'Top themes in packaging 2022'. It lists the top ten themes shaping the future of the packaging industry, including: advanced materials, artificial intelligence (AI), COVID-19, demographics,

materials are the most important of the ten themes listed within the report. He also argues that these themes have experienced the most significant changes over the past two years.

Packaging trend 1: COVID-19

The effects of the pandemic were experienced worldwide and prompted a shift in consumer

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attitudes towards shopping. Concerns over virus contamination led to a rise in contactless deliveries and the use of single-use items. As the pandemic subsides there are global calls from institutes such as the North London Waste Authority (NLWA) and non-profit ocean conservation organisation Oceana Canada to cut single-plastic use.

The report says that greater emphasis must be applied to wean consumers off “backsliding” towards single-use items, non-fillable and non-recyclables. The report also states that greater investment in the post-consumer recycling infrastructure will need to occur to meet demands for plastic reduction made at The UN Climate Change Conference (COP 26).

“Packaging providers must focus on upstreaming to “future proof” their solutions. These actions position towards greater sustainability through ethical changes in the supply chain. Upstreaming tackles a problem like excessive plastic at its root cause, rather than leaving consumers to deal with wasteful remnants,” Henry tells Packaging Gateway.

He continues: “According to GlobalData's 2021 Q3 Consumer Survey, 75% of global consumers say “environmental issues” are quite/extremely important. Brands are therefore increasingly expected to prevent waste from being created in the first place.”

Packaging trend 2: Online food delivery

The growth of online food deliveries, accelerated by the pandemic, has placed a greater focus on packaging and its waste. New regulations and environmental calls against single-use plastics are forcing businesses to rethink their packaging choices. The report states that foodservice operators must consider partnering with (business to business) B2B packaging providers that offer reusable alternatives.

The rapid growth of quick commerce (Q-

commerce) has built an on-demand avenue for the prompt delivery of small quantities of food with some platforms like Getir promising to deliver orders within ten minutes. The growth of this model shows how convenience has become a commodity for time-poor consumers.

Henry points out: “Transit packaging must evolve to meet the huge acceleration of e-commerce, and ultimately become compatible with household recycling systems. Packaging providers must look to minimise non-recyclable secondary packaging since consumers do not want nor expect the burden of post-consumption disposal.

“At the start of the pandemic, Amazon India began to use paper cushions to replace plastic dunnage like air pillows and bubble wrap in all of its fulfilment centres. Such measures have enabled Amazon India to eliminate a significant use of plastic while continuing to protect customer orders.”

Henry further explains that single-use compostable takeaway packaging is likely to gain more traction following the pandemic due to consumers' heightened concerns around waste.

Packaging trend 3: ESG

The report says many organisations are 'future-proofing' by acquiring circular economy-compatible companies to avoid falling behind their competitors. As governments and environmental agencies call for bans on single-use plastics, the report suggests packaging providers must deploy comprehensive sustainability plans beyond ESG targets.

Henry says that “in the wake of the pandemic, greater attention has been paid to matters around trust and accountability. According to GlobalData's 2022 Q2 consumer survey, 78% of global consumers actively look for “sustainable / environmentally-friendly” features when making a purchase. “Reuse and refill” schemes have grown in popularity as consumers make more proactive

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choices in their shopping habits.

“In Europe, regulation supports the growth of refill schemes as the 2021 Directive on Single-Use Plastics aims to encourage less wasteful behaviour.”

Henry also states that the presence of global reuse platform, Terracycle's Loop, in multiple countries like the UK, Japan and Canada, suggests reusable packaging holds an appeal that transcends national attitudes and sentiments.

Packaging trend 4: Advanced materials

Advanced materials are highly advantageous to consumer goods brands, according to the report. Increasingly innovative materials beyond plastics and paperboard are opening up new potential applications in packaging. The report explains that in the UK, the National Graphene Institute has looked at several new ways to use graphene and other two-dimensional (2D) materials in an array of applications including food packaging.

3D printing is the construction of a three-dimensional object from a digital model that offers a role in on-demand packaging as well as advantages to rapid prototyping. This growing trend allows companies to create packaging at a greater speed and at a lower cost than ever before.

“Rot-reducing coatings, such as polysaccharide-based films, may also serve as an eco-friendly way to extend the shelf-life of fresh food. Advanced materials offer an alternative method to reduce waste as well as consider new resources. Rocketing inflation and the cost-of-living crisis has spiked raw material and energy costs, leaving packaging providers vulnerable so soon after the pandemic. The cheaper cost of 3D printers today offers manufacturers the flexibility to attempt new ways of working – especially when dealing with prototyping,” Henry explains.

Packaging trend 5: eCommerce

The importance of packaging visuals has

increased due to social commerce (S-Commerce) as eCommerce was impacted in many ways during the pandemic. COVID-19 saw consumers spending more time online than before. Nearly a quarter of consumers (24%) were spending more time browsing social media and 69% of consumers were avoiding going to large supermarkets, according to Week 11 of Global Data's 2020 Coronavirus (COVID-19) Recovery Consumer Survey and Week 1-10 of COVID-19 Tracker Survey.

The combination of eCommerce and social media networks have brought about a seamless shopping experience. Social media now serves as a hugely important marketing platform across the consumer goods industry.

The report says that as online models become increasingly significant, companies will want to take this opportunity to develop a more digitalised supply chain management system to help service these and other channels. Packaging providers will therefore need to work in tandem with brands and retailers to ensure digitalisation works for all stakeholders from production to the end-consumer.

Packaging trend 6: Artificial intelligence

By implementing AI technologies such as machine learning (ML), companies are able to better standardise procedures and eliminate human error. A trending theme is the use of robots for the sorting of goods for recycling. US carton recycling industry organisation, the Carton Council of North America, and renewable energy semiconductor manufacturer AMP Robotics, have collaborated to create an AI-powered robot named Clarke. The robot is used to help with the sorting process of cartons, plastic bottles and containers.

AI has improved supply chain management since AI systems use predictive analytics. The report says “using predictive demand tools, these AI systems can balance supply and demand –

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resulting in optimisation for warehousing and inventory costs. Greater AI integration will support retailers and manufacturers to respond more quickly to future opportunities and threats.”

Packaging trend 7: Demographics

The industry has seen brands and manufacturers seeking to improve label readability and packaging suitability for older consumers without stigmatising them. . For example, French bottled water company, Wattwiller, redesigned its bottle caps in a daisy flower shape to make its products easier to open.

In the years ahead, an intergenerational approach is crucial to creating successful product packaging that appeals to consumers across all age groups.

Packaging trend 8: D2C (direct to consumer)

Increased at-home consumption and remote working have already become entrenched behaviours because of the epidemic. According to GlobalData's 2021 Q3 survey, 22% of global millennials and Gen Z consumers purchase beauty and grooming products directly from brands online. Alongside clothing, personal care goods represent the largest consumer goods category to be purchased through D2C channels.

During the pandemic, Nestlé UK also adjusted to changing demands by collaborating with the Deliveroo Essentials platform, which allows consumers to purchase a range of grocery items online that are delivered directly to their homes.

This demonstrates how D2C channels enable brands to market additional goods to existing customers and boost the likelihood of repeat business.

D2C companies need to be digitally minded as they often lack a physical space to sell their products. This also means packaging is seen as vital to boost their brand awareness.

Packaging trend 9: Health and Wellness

According to GlobalData's 2021 Q1 consumer survey, three-quarters (75%) of global consumers say “information or claims on packaging about production method” are essential or nice to have.

Consumers are increasingly appreciative of transparency and want brands to clearly explain ingredient benefits on product packaging. The pandemic has prompted greater awareness around health. As a result, brands are being encouraged to describe ingredients such as probiotics, superfoods, CBD, and plant-based formulations that will entice health-conscious consumers.

Packaging trend 10: Robotics

The use of robots within factories became a tool for protecting the health of employees during the pandemic. Placing robots in every other position helped to ensure employees maintained an adequate distance to reduce the risk of contracting a virus. In the US, Costco's highly automated chicken packing plant in Nebraska reported just one COVID-19 case among 800 employees.

The use of collaborative robots (cobots) within factories are boosting efficiency, whilst helping to increase profits. Packaging and palletising collaborative cobots are leveraged in a range of industries to optimise fulfilment processes in a number of tasks. The report says that packaging robots can streamline production as they can lift more products at any one time, improving packaging capacity and resulting in reduced labour costs.

Source: Packaging Gateway



Top 18 Kraft Paper Properties You Should Know

packaging) is ultimately designed to win the attention of consumers in the first place on supermarket shelves, prompting them to finally purchase. In order to achieve this goal, brands must convey the uniqueness of the product when they advertise. And in the commodity packaging must highlight the personalized things, whether the color or packaging material should be different from the peer. Only in this way can consumers see the ads after the next visit to the mall again because of personalized packaging caused resonance, stimulated to create the impulse to buy.

Packaging factory choose what kind of Kraft paper is better for printing?

Printing plant requirements for printing materials are relatively high, because each printing product its function and use is different, so it will have different requirements for its appearance and quality. There are two main aspects of the quality of Kraft paper for differential printing.

One is to check the quality of its appearance, including looking at the surface of Kraft paper whether there is dust, stains, holes, creases, cracks, light transmittance points, fiber groups, corner neatness and so on. These will directly affect the quality of Kraft paper properties and printing effect.

Second, for the internal quality of Kraft paper, to understand including the physical properties of Kraft paper, chemical properties, absorption performance, optical properties, surface properties, printing performance and other more professional knowledge.

In addition, the water content of Kraft paper is one of the important factors that will affect Kraft paper printing. If the water content of Kraft paper is too high, it will be easy to wrinkle when printing. For some Kraft paper with poor uniformity and rough surface. In printing due to the paper ink absorption is large, easy to penetrate, so it is best not to choose too deep color for printing Kraft papers.



What paper does a Kraft notebook usually use?

In general, ordinary notebook pages use between 400 or 500 grams of paper make cover, the inside page is used in 70 grams or 80 grams of ordinary paper. Because of the better physical properties of Kraft paper, it is generally possible to use lower grams of brown Kraft paper and white Kraft paper to meet the requirements. Generally, if you use Kraft paper to make the outer page, you can choose 400 grams or 450 grams Kraft paper. And for inside page, you can choose between 50 grams or 70 grams of Kraft paper to meet the demand.

The brown Kraft paper, which is usually used to make the outer pages of the notebook, is specially treated, while the brown Kraft paper on the inner page is smoother and the color is lighter. Light color mainly plays a better role in protecting the eyes, paper smoothness is mainly to have a better writing effect Kraft paper properties. White Kraft Paper, American Bull card, refined Kraft paper, writing papers, etc. are all Kraft paper for notebooks.



Use Kraft paper to make brand printed brochure.

Traditional craft to do brochures often use art paper, but art paper is not environmentally friendly, does not

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conform to the current many products to promote the concept of environmental protection. In order to highlight the characteristics of the product, at the same time with the outside of the product publicity, the vast majority of the market now production brochures more and more use of Kraft paper, with Kraft paper to do brochures have a lot of advantages of Kraft paper properties.

First, if the product needs to highlight the product quaint, natural characteristics, you can choose the color of all wood pulp Kraft paper to do the brochure, the color of Kraft paper itself unique classical color, with the unique tattoo of wood pulp, will give people a simple, elegant feeling, see the brochure can be associated with the characteristics of the product.

Second, if you need to highlight the product is green, environmentally friendly characteristics, you can choose recycled Kraft paper to do the cover of the brochure. Recycled Kraft paper itself represents environmental protection, in full compliance with the concept of product promotion.

Third, if the product is for customers in US and the European countries, then the choice of recycled Kraft paper is even more right, because in US and the European countries environmental protection concept deeply rooted in the country, see the use of recycled Kraft Paper production brochure, first of all will be associated with the product, brochure is still so, the product is not to mention.

The use of brochures in the actual production process, we need to according to the product's promotion concept to choose the brochure production materials. This will allow you to take out in a large number of goods, grasp the details of product production, will be highly recognized by the market.



The introduce of bamboo pulp Kraft paper.

Bamboo pulp Kraft paper is a kind of Kraft paper product which is widely used in recent years. In general, we classify bamboo pulp Kraft paper into the refined Kraft paper product category, so what are the advantages and disadvantages of bamboo pulp Kraft paper, and what are the common uses.

Due to the rapid growth of bamboo materials used in bamboo pulp Kraft paper, Kraft paper products produced from this raw material are very extensive in the source of raw materials, and the growth rate is very fast relative to coniferous trees. Therefore, bamboo pulp Kraft materials relatively less impact on the environment, which is the advantage of all bamboo pulp Kraft paper. In addition, bamboo pulp is softer than other slurry, and the finished Kraft paper products are more flat and delicate than other Kraft paper products, with better feel and visual feel Kraft paper properties.

Because bamboo fibers are softer than coniferous fibers, we will find that, in the same number of grams, the stiffness and hardness of all bamboo pulp Kraft paper is slightly worse than the use of full coniferous pulp Kraft paper, so it is said that bamboo pulp Kraft paper in the use of certain restrictions.

Because the hardness and stiffness of the whole bamboo pulp Kraft paper are relatively poor, but the color of the whole bamboo pulp Kraft machine and the smoothness of the paper is very good. Therefore, all bamboo pulp Kraft paper is more suitable for boutique packaging, high end packaging and other fields.



Characteristics and application of coated Kraft paper.

Coated Kraft paper stock is often used in printing. It is a Kraft paper that is very popular with people in the printing industry. Coated Kraft paper is made by a layer of coating added to the paper surface by using coating technology. After adding the coating, its printing effect

Top 18 Kraft Paper Properties You Should Know

will become very good, can be comparable with art paper, white cardboard. Compared to ordinary Kraft paper, coated Kraft paper can print a more beautiful packaging product, this is one of coated Kraft paper properties.

Coated Kraft paper also has a very high compression resistance, tear resistance. Can replace corrugated cardboard packaging, commonly used in auto parts, household appliances and other packaging. And has moisture-proof and anti-freezing function, so it can also be used for cold drinks that need to be refrigerated, frozen food outside packaging. Swedish coated Kraft paper is a food-grade Kraft paper produced by all wood pulp, which can be used for packing with food, medicine or fast food boxes.

Coated Kraft paper although the printing effect, physical properties are very good, but it also has obvious shortcomings. Because coated Kraft paper there is a layer of coating, so after printing Kraft paper ink absorption capacity will be blocked by the coating, drying time will be much longer, it takes about 20 seconds. Therefore, its printing efficiency will be lower, and easy to appear decolorization and other printing quality problems.



Electrostatic phenomenon caused during Kraft paper printing.

Kraft paper is used in a variety of printing, especially in dry weather, Kraft paper in printing will produce static electricity, resulting in the inability to continue printing. So is there a way to solve the problem of electrostatic electricity generated by Kraft paper?

In the printing process, Kraft paper is transported under the friction between the conveyor tape and the press wheel when it is separated in the pile of papers. Between paper and paper, between paper and machine, always in a state of friction. The charge generated during friction. When the charge gathers, Kraft paper carries an electric charge. When Kraft paper with the same polar charge, Kraft paper is mutually exclusive, resulting in printing overprinted is not allowed to be out of touch with paper. When Kraft

paper has a different kind of charge, resulting in double sheets as well as multiple sheets, overprinted is not allowed and so on. The surface of the paper with static electricity is also easy to adsorb some paper hair and dust, so it is important to eliminate the static electricity of the paper when printing.

Kraft paper eliminates electrostatic method, one is to use electrostatic eliminator elimination. The electrostatic eliminator used in the printing press has an inductive electrostatic eliminator, a high-frequency high-voltage electrostatic eliminator, and is installed to the best near the drum.

The second is to improve the humidity in the printing shop. The production of electrostatic is related to the humidity of the operating environment, the general workshop humidity is less than 40%, easy to appear static electricity. So when printing, sprinkle some water around the pile of paper and the machine, or use an air humidifier to adjust to improve the humidity in the printing shop to avoid the generation of static electricity. The third is to carry on the humidification treatment to the Kraft paper. When the water content of Kraft paper is low, it is easy to bring static electricity.

When the paper with static electricity is serious, it is necessary to stack the paper into a more humid environment for a period of time, but to prevent excessive moisture caused the 'lotus leaf edge' phenomenon.

What will cause poor tensile forces of Kraft paper?

The quality of the finished product will be directly affected by the good or bad of Kraft paper tension. When a finished product is made, whether it is durable or not is to see the tension of Kraft paper, then what is the cause of the poor tensile force of Kraft paper properties? In fact, this reason is caused by many aspects.

It is known that Kraft paper is made of all wood pulp or recycled pulp. Under normal circumstances, all wood pulp made of Kraft paper is better tensile force than recycled pulp made of Kraft paper. Second, the same wood pulp made Kraft paper, the craft is not the same, then the tensile force is different. If there is any material added to the Kraft paper, then the result is completely different. The quality of Kraft paper can also be expressed in terms of material. If the wood used is very good, then the Kraft paper made from will be very good.

The tensile force of imported Kraft paper is very good, because the general import of Kraft paper is made of all

Top 18 Kraft Paper Properties You Should Know

wood pulp, and many imported Kraft paper is required to be printed, and made into a lot of durable finished products, so imported Kraft paper will generally with good tensile force.



The evenness of quality Kraft paper

Today's market for Kraft paper products and raw materials is becoming increasingly chaotic. Some customers in the purchase of Kraft paper is very pay attention to the physical properties of papers, such as breakage resistance, tightness, extrusion, folding resistance and so on. In fact, these physical Kraft paper properties are related to the evenness of Kraft paper.

The evenness of Kraft paper is closely related to the quality of Kraft cardboard, because the raw material of a piece of paper is fiber, and evenness is the uniformity of the fibrous tissue of the paper. The paper can be seen in the place of the bright light. Kraft paper has a good degree of evenness and will have a lot of advantages. In the printing aspect of the poor evenness of paper, the surface smoothness is relatively poor, ink absorption and tightness will be uneven, such inhomogeneity is bound to disrupt the evenness of the printing screen and reduce the quality of printed products.

Evenness is so important, but it is not easy to control when producing paper. Many factors can lead to changes in uniformity at the time of production. The lack of pulping is an important factor affecting the poor evenness of Kraft paper, and the longer the fibers, the easier it is to gather together. The lack of pulping can easily lead to fiber forming, resulting in uneven distribution of paper fibers, serious impact on the quality of paper.

What factors affect the hardness of Kraft paper?

The same gram weight of Kraft paper may have different hardness paper properties, which is mainly due to the original solid of the pulp. As we all know, the raw material of Kraft paper is plant fiber, the trunk part of the tree has the highest content of wood fiber, so the production of Kraft paper hardness is the highest, that is, we often say pure wood pulp Kraft paper.

However, recycled Kraft paper will add bark, rags and other materials, hardness will be lacking. So the hardness of Kraft paper depends on the content of wood fiber, the higher the content of the paper hardness is better. Different varieties of tree fiber content is not the same, different areas of the tree fiber content is also different, so the pulp produced after the production of Kraft paper hardness will be different. To reach the same hardness, it is best to use the same batch of Kraft paper.



The difference between FSC certified Kraft paper and 100% recycled Kraft paper.

The difference between FSC certified Kraft paper and 100% recycled Kraft paper is mainly reflected in the use of raw materials, that is to say, two kinds of Kraft paper products are using different types of raw materials, its products themselves are not very different. FSC certified Kraft paper usually uses the original wood pulp as raw material for papermaking, while 100% recycled Kraft paper uses the recycled pulp as raw material for paper making, which is the biggest difference between the two. FSC belongs to the forest Green Certification range, with tractability, each FSC certified Kraft paper can be traced back to the raw material from which forest farm. FSC Kraft paper and 100% recycled Kraft paper at the same point is that they all embody the concept of environmental protection, first of all, the pursuit of environmental protection, FSC Kraft paper is usually made by artificial forest wood as raw materials, 100% environmentally friendly recycled Kraft paper is the use of recycled pulp as raw materials, but both have environmental characteristics.

Above introduced 18 basic Kraft paper properties knowledge that you should know about Kraft paper. We don't sell Kraft paper, but you can shop Kraft paper gift boxes and Kraft bags made from refined Kraft paper from our store.

How to Choose Shipping Box Size, Shape and Strength

Whether you're looking to ship something smaller than your hand or so big it needs to be moved in a truck, picking the right box is important. With various shapes, sizes and strengths, it can be challenging to know where to begin. This guide will help you choose the right shipping box to fit your business needs.

Shipping Box Carriers

From shipping orders to external customers to meeting internal needs like supply transfers and storage, there are many reasons a business

maximum specifications or your package may have to travel with a freight carrier.

Shipping Box Sizes and Shapes

Typical standard shipping boxes are made of corrugated cardboard. You can choose from an assortment of shapes and box strengths. Depending on the size and weight of your product, you may need a more durable box.

Below are the most common box shapes and strengths. However, there are many more types of boxes to choose from.

Cube boxes	Cube boxes feature the same length on all edges and have the same square box shape on all sides.
Multi-height boxes	Multi-height boxes have a design that allows you to choose between various heights while keeping a fixed width and depth. Depending on the box, you could have two, three or more options for adjustable box heights.
Long boxes	Long boxes have a longer length compared to their width and height. This allows loading elongated items that can ship on their side or lying down flat.
Tall boxes	Tall boxes feature a smaller length and width compared to a taller height. That makes them best for shipping tall items that can't be folded down and need to stay upright while in transit.
Telescopic boxes	Telescopic boxes allow for shipping long items that may not fit into a single box. They fit together and work well for shipping large and tall items.
Side-loading boxes	Side-loading boxes are often wide and thin with an opening on the narrow side to load or unload items with a shape similar to a framed photo or poster, among other uses.

may require shipping boxes. Not only do shipping services in the U.S. charge based on the size and weight of the box being shipped, they also have size and weight restrictions. Check to make sure your box falls below the

Box Sizes

Determining the size of your shipping box is the first place to look. Boxes can come in traditional rectangular shapes and cubes, or elongated shapes and sizes for specialized uses.

How to Choose Shipping Box Size, Shape and Strength

Box Strengths

The strength of shipping boxes is generally measured using edge crush test (ECT) for stacking strength or the Mullen Test for bursting weight. One of these two measures will be printed on any corrugated shipping box as part of its box manufacturer's certificate (BMC), a circular stamp that includes the manufacturer's name and other technical information.

The two most commonly used box strengths for shipping are:

- 32 ECT: This type of box can stand up to a 32-pounds per square inch vertical compression and is common when stacking lighter weight shipments.
- 200#: For somewhat heavy-duty shipping, 200# boxes are popular options, and generally support a bursting strength of about 50 percent higher than 32 ECT boxes.

guidelines. If you need a box that holds more than 200 pounds of pressure, stronger, heavy-duty boxes are available.

Digging Deeper: Burst Strength (Mullen) vs. ECT

Why are there two different box strength ratings? Storage boxes and shipping boxes are subject to many different kinds of use and abuse, which can cause them to fail in different ways. One box might be punctured by a collision in a sorting facility, while another might collapse in a warehouse under a steady load. The characteristics that help a box resist one kind of damage may do little to prevent another, so assessing and comparing overall durability a complex task.

A corrugated box's burst strength is a measure of durability assessed using the Mullen test, which involves slowly applying hydraulic pressure to the corrugated board's face until its linerboard component ruptures. One common burst strength rating for corrugated boxes is 200#,

UPS Guidelines	Fiber Box Handbook	Box Type
30 lb	65 lb	32 ECT Single Wall
40 lb	65 lb	200# Single Wall
50 lb	95 lb	44 ECT Single Wall
60 lb	100 lb	48 ECT Double Wall
80 lb	120 lb	51 ECT Double Wall
	160 lb	71 ECT Double Wall
	280 lb	90 ECT Triple Wall

Use the chart below to select the box type based on the weight of your shipment using the UPS and Fiber Box Handbook strength

which is given to material that can withstand at least 200 pounds per square inch under test conditions before it ruptures.

How to Choose Shipping Box Size, Shape and Strength

According to "Cartons, Crates and Corrugated Board: Handbook of Paper and Wood Packaging Technology" (Diana Twede, Susan E. M. Selke), burst strength is useful for predicting how a box will withstand the kind of forces that it experiences when it's dropped, jostled, jammed or otherwise subjected to rough treatment, as often happens in high-speed sorting facilities, where boxes - many of which contain inadequately secured loads - are expected to drop or slam into each other. For this reason, some small-package shippers prefer to use shipping boxes that have been rated according to the Mullen test, which demonstrates resistance to this kind of stress.

The edge crush test (ECT) is a way of predicting the compression strength of a corrugated box. According to "The Handbook of Package Engineering, Third Edition" (Joseph F. Hanlon, Robert J. Kelsey, Hallie Forcinio), the ECT was developed to be a more direct indicator of a box's ability to hold a static load over a period of time. This ability is also called the stacking strength of the corrugated box.

Roughly speaking, the ECT can be thought of as measuring how stiff the board is when the box is standing up in the intended position. The testing procedure involves standing a piece of corrugated board on its edge so that its flutes are upright (vertical), and then measuring how much downward force it takes to crush the board.

When boxes are palletized, they are likely to receive much less of the rough treatment that causes box walls to burst, but their stacking strength is still very important. According to Twede and Selke, many shippers of palletized freight prefer to choose boxes based on ECT ratings, because this more directly describes stacking strength.

Shipping Boxes Are an Important Part of Product Delivery

With the right boxes ready to go, your business can successfully meet its shipping and packaging needs, while providing safe and secure delivery. Taking the time to understand shipping box sizes and shapes will help you reach the best result for your customers - and that's an ideal outcome for any business.

Types of Corrugated Shipping Box Closure: RSC, FOL, HSC

The most widely used style of corrugated shipping box is called a regular slotted container (RSC). On an RSC-style box, all the closure flaps are the same length—one-half of the box width. This means that the outer pair of flaps will meet in the middle when closed, while the other set of flaps—the inner flaps—will not. The RSC is a relatively inexpensive box style in part because there is very little scrap when the box is made.

On a full overlap slotted container (FOL), all the closure flaps are longer—as long as the full width of the box. This means that the outer flaps will overlap each other almost completely, creating extra layers of corrugated board that result in a strong, cushioned box. The overlapping flaps also help give compression strength if the box is on its side.

A half-slotted container (HSC) is like an RSC, but with one flapless, "open" side.

RSCs, FOLs and HSCs are all slotted containers, but there are other less common box forms, including self-erecting boxes, Bliss boxes, telescope boxes and folders.

Source: Grainger



FCBM members represent at Invest India organized by MOFPI



A report by Shri Alok Gupta, Chairman, Taxation Committee on Invest India event.

A roundtable interaction under the Chairpersonship of Secretary, Ministry of Food Processing Industries of India (MOFPI) organized by Invest India was held on March 23, 2023 at Vigyan Bhavan, Annexe, New Delhi.

On behalf of the FCBM of India, Shri Alok Gupta, Shri Greesh Sardana, Shri Gagan Kapoor, Shri Aditya Sood, and Shri K. P. Singh attended the meeting. The meeting was regarding the World Food India, a mega food event scheduled for November 3-5, 2023 at Pragati Maidan, New Delhi.

Shri Varun Sood, VP - Invest India delivered the welcome address and Smt. Anita Praveen, Secretary - Ministry of Food Processing Industries, GOI delivered the keynote address.

Shri Janendra Kumar of Invest India gave a presentation on the proposed mega event in November, its key elements and expectations from member companies. This was followed by participants' individual presentations on the requirements, problems and hurdles faced by their respective industries. The respective government delegates assured them that would try address their issues to their best of capacity.

Invest India informed that they planned to organize a seminar in collaboration with FCBM on the difficulties and problems faced in packaging of processed food and the way ahead. The seminar was proposed to be held in May 2023, however dates will be declared soon.

The meeting ended with closing remarks by Minhaj Alam, Addl. Secretary, Ministry of Food Processing Industries, GOI.



KACBMA conducts its first general meeting of 2023



On March 10, 2023 KACBMA held its first general meeting at St. Marks Hotel Pvt Ltd. Bangalore followed by a technical seminar by Ram Kumar Sunkara. The seminar held on following topics got a good response from all 93 participating members:

1. Score line cracking - Root cause Analysis
2. Score line cracking -possible remedies
3. Material management



HPCBMA hosts FCBM 2nd MC meeting at Parwanoo, Himachal Pradesh



On April 8 & 9, 2023 HPCBMA hosted the second FCBM Managing Committee meeting in the beautiful surroundings of Timber Trail Terraces, Parwanoo, Solan, Himachal Pradesh. The sub-committee meetings were held on April 8, 2023 followed by the Managing Committee meeting

on April 9, 2023, where various matters regarding the corrugated industry were discussed.

Amidst the Himachal natural beauty, the warm hospitality and excellent organisation by HPCBMA, the meeting host was appreciated by the members present.



WICMA held an industry seminar on 'Score line Cracking - Analysis & Remedies'

On March 24, 2023 WICMA held a Seminar on “Score line Cracking - Analysis & Remedies” at the Golden Chariot Vasai Hotel & Spa. The seminar got a very healthy response from 10 exhibitors and 80+ participants.

Shri Ramkumar Sunkara, R&D Vice Chairman - WICMA presented an in-depth analysis on the reasons for box cracking and the measures available to tackle this persistent and challenging issue on a long-term basis.



WICMA's 45th certificate course goes Hybrid with great response



WICMA's Certificate courses in Corrugated Packaging have been much acclaimed by members, consumers and many Corrugated industry stakeholders. Till Feb 2023, in all previous 44 batches 1000+ students from Corrugating & User Industries have been benefited by these Courses.

The 45th course in its hybrid mode held from Feb 13-18, 2023 at WICMA Auditorium, Mumbai was inaugurated by Shri Vineet Jain, President-FCBM.

Amongst the 43 participants, 11 online participants hailed from places like Mumbai, Satara, Chennai, Bangalore, Kanpur, Jammu & Kashmir, Kolkata, Visakhapatnam, Kerala,



Shri Vineet Jain, President - FCBM
addressing the hybrid batch course participants



Shri Vineet Jain, President - FCBM
addressing the hybrid batch course participants

Karnataka, Dandeli, Kolhapur, and Surat.

The Course, spread over 6 days covered various basic subjects such as raw materials, manufacture, manufacturing defects & remedies, design, quality control, costing, marketing, wastage reduction, among other subjects. Besides, there were practical demonstrations of QC tests, box design and a visit to a Semi-Automatic plant.

On 13th Feb 2023 with the inauguration Shri Vineet Jain, President-FCBM made his first official visit to the FCBM Office.



(L-R) Bharat Parekh, Hon Secretary, Shri Vineet Patel, President-FCBM, Kirtikumar Gandhi, President-WICMA and Ram Kumar Sunkara, Course facilitator

Upcoming Events



Sino Corrugated South 2023

July 12-14, 2023

Shanghai New International Expo Center, China

In its capacity as a globally awaited event, WEPACK will cover the entire packaging industry chain and its latest trends due to skyrocketing demand. Owned by WEPACK, the 7-in-1 mega shows.



PackPlus 2023

Aug 10-12, 2023

Pragati Maidan, New Delhi, India

PackPlus is India's biggest event for packaging, converting and supply chain. Over the years, PackPlus has established itself as a great business conducting platform for the packaging industry in India.



Packex India 2023

Sept 7-9, 2023

Bombay Exhibition Center (BEC), Mumbai, India

International Exhibition on Packaging Material and Technology. With growing exhibitor and visitor numbers year on year, PackEx India has established itself as the most valuable platform for packaging materials and machinery suppliers and packaging users.



India Corr 2023

Sept 28-30, 2023

Bombay Exhibition Center (BEC), Mumbai, India

IndiaCorr Expo is a platform to grow your business 10x by building the right network, sourcing top-notch technologies, and by learning the latest corrugated packaging and folding carton industry trends.



India Folding Carton 2023

Sept 28-30, 2023

Bombay Exhibition Center (BEC), Mumbai, India

India Folding Carton is a unique show with special focus on the folding carton industry. Showcasing the best solutions involved in the process from manufacturers to dealers of pre-press equipment, carton making machinery, printing machinery and post-print equipment.



LABELXPO INDIA

LabelexpoIndia 2024

Nov 14-17, 2024

India Expo Centre & Mart, Greater Noida, Delhi NCR

Labelexpo India brings the industry together for four days of live demonstrations. Discover state-of-the-art presses, intelligent labels, finishing units, inks, dies and substrates from the leading manufacturers.