

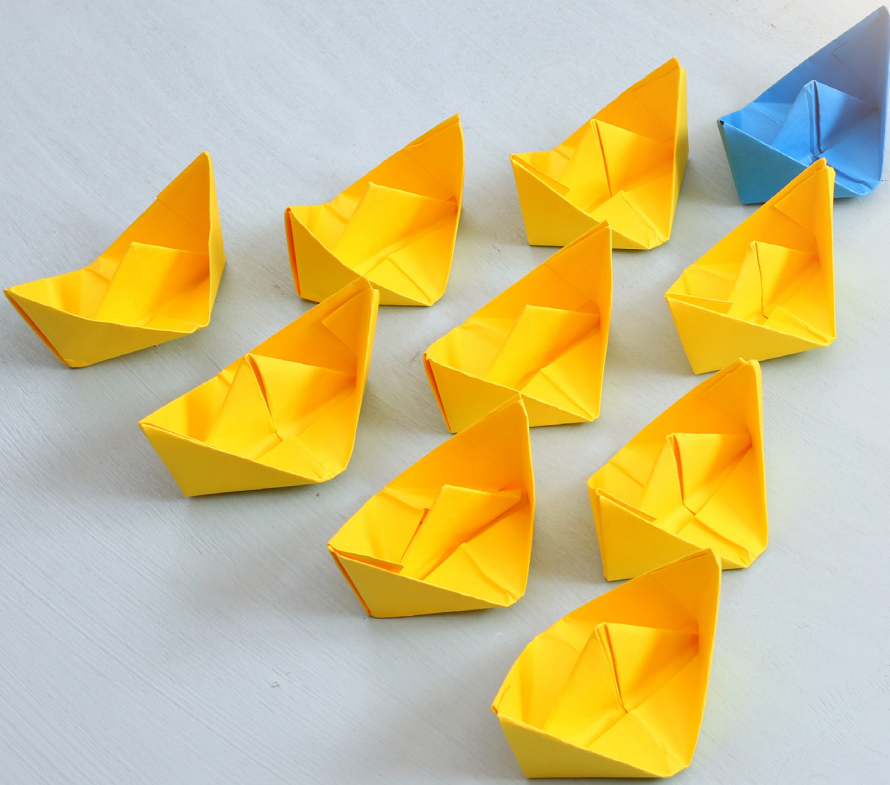


DRIVING SUSTAINABILITY FOCUS WITH INCREASED ADOPTION OF RECYCLED KRAFT PAPER

Abstract

The demand for eco-friendly Kraft paper has seen a vast growth globally, across different industries – with rising environmental concerns towards the use of plastic and an increased interest in the usage of recycled paper. A large number of companies have already adopted the usage of recycled paper shopping bags in the developed markets of US and Europe. Similar practices across different retail packaging applications are also witnessed in emerging economies, especially in China and India, driven by the regulatory stringency in these regions.

This paper talks about the usage of recycled paper as a key solution to reinforce the environmental sustainability initiatives in organizations, and how such practices can help them in improving the goodwill of their brand among customers.



Analyzing the various types of Kraft paper

Kraft paper is a high end paper, which is completely recyclable and biodegradable, derived from the 'Kraft' process of converting softwood into wood pulp. It has high elasticity and high tear resistance - majorly used in packaging applications such as food and non-food packaging, grocery bags for supermarkets and packed foods, and shopping bags for textiles and home appliances across different industrial sectors.

Generally, Kraft paper can be classified into three types based on the raw material used in its manufacturing:



Virgin Natural Kraft Paper

- Made up of virgin wood pulp fiber (majorly derived from spruce and pine trees)
- High strength and tear resistance level
- Major usage in heavy duty industrial applications



Natural Recycled Kraft Paper

- Made up of recycled fiber
- Lower strength and tear resistance as compared to virgin pulp paper
- More environmental friendly alternative
- Major usage in grocery bags for supermarkets and retail shopping bags



Blended Fiber

- Made up of virgin and recycled fibers, blended together in different combinations
- Can also be manufactured in layers - top ply layer with virgin and bottom ply with recycled, and vice versa
- Major usage in grocery bags for supermarkets

These Kraft papers can be of natural shade (brown) or bleached (white) color, and can also be dyed to different colors. These papers are used across wide industrial applications including cement sacks, chemicals, animal feed and food, shopping bags, and other packaging applications.

To understand the attributes of different types of Kraft paper, following is the benchmarking for unbleached (brown) and bleached (white) paper by the type of fiber content:

Unbleached Kraft paper:

Parameter	100% Virgin Natural Kraft Paper	100% Recycled Kraft Paper	Blended Fiber/ Partially recycled*
Description	Made up of virgin wood pulp fiber	Made up of recycled fiber (recycled OCCs, Kraft paper etc.)	Partially made of virgin and recycled fibers
Tear resistance level	Long fibers – high durability and tear resistance	Shorter fibers – lower durability and higher breakage	Moderate durability and tear resistance in comparison to 100% virgin/recycled paper
Smoothness	Moderate	Low	Moderate
Printability quality	Moderate	Low	Moderate
Tensile strength	High	Low	Moderate
TEA	High	Low	Moderate
Stretch at break	High	Low	Moderate
Usage in shopping bags for apparels and accessories	Moderate	Moderate	High

Bleached Kraft paper:

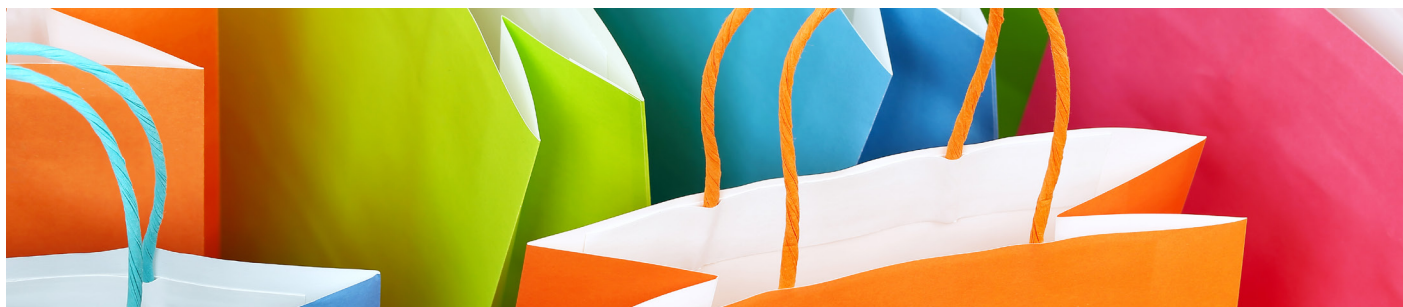
Parameter	100% Virgin Natural Kraft Paper	100% Recycled Kraft Paper	Blended Fiber/ Partially recycled*
Smoothness	High	Moderate	Moderate
Printability quality	High	Moderate	Moderate
Tensile strength	High	Low	Moderate
TEA	High	Low	Moderate
Stretch at break	High	Low	Moderate
Usage in shopping bags for apparels and accessories	High	High	High

For the above benchmarking analysis, considered basis weight for the paper as 80 g/m² and test method ISO 1924-3. Above mentioned analysis is average and relative benchmark to understand comparative analysis between different variants of Kraft paper. Actual attributes might vary marginally by suppliers, paper gloss, and paper finishing.

Tensile strength - It is the maximum stress required to break a strip of a paper sheet.

TEA (tensile energy absorption) - This test is a measure of the paper capacity to withstand a shock when subjected to sudden high tension.

Stretch at Break - This quality test is run to measure the load or stress the paper can bear before it tears.

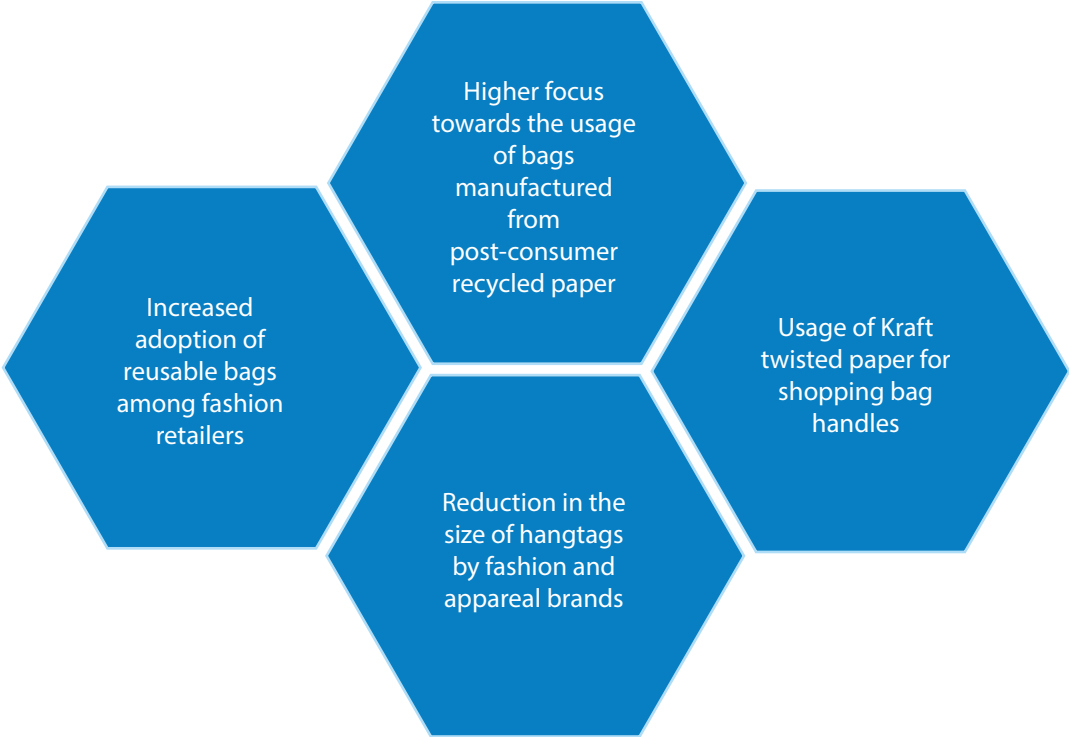




Supply and demand – the difficult situation

Global demand has overtaken the supply of unbleached Kraft paper since the latter half of 2017. Following that, price hike announcements were made by leading paper manufacturers around the world (specifically in North America and Europe), resulting in the upward pressure on the prices of sack and specialty Kraft paper in 2018. Similar upward price pressure is expected in 2019 with only a few investment plans on new capacity additions.

Industry trends



Industry best practices for recycling and reusing

- **Increased adoption of reusable and eco-friendly shopping bags**

A large number of retail branded stores are introducing reusable and recyclable paper shopping bags made of unbleached and bleached Kraft paper as part of their environmental sustainability practices. Some retailers have also started offering reusable tote bags (large bags) made of organic cotton rather than paper bags, in order to reduce the paper waste even further (highly preferred among department and supermarket stores).

A few well known retail examples include:

- Tommy Hilfiger uses shopping bags containing at least 40% post-consumer recycled paper across

their stores in North America

- Calvin Klein (brand of PVH Corp.) uses white recycled paper made up of minimum 40% post-consumer recycled material
- Macy's, a department store company, uses shopping bags made of 100% recycled paper that can be reused and recycled multiple times. Macy also offers reusable tote bags.

- **Long-term supplier agreements**

Pulp and paper is a volatile industry and depends highly on the demand-supply dynamics of the market, pulp production, paper recovery rate, and regulatory changes. Hence, it is preferable

for the buyers to engage in a long-term agreement with Kraft paper manufacturers in order to mitigate the various supply and price risks.

- **Bulk sourcing**

Most of the paper shopping bag manufacturers offer price discounts on large volume purchases, as it reduces their time and effort associated with paper cutting, bag designing, and printing works. Hence, it is always preferable for buyers to source paper shopping bags in large volumes. This also provides an opportunity to the buyers in optimizing their logistics costs.



Conclusion

Higher sustainability focus coupled with increased regulatory stringency is driving retail and fashion brands around the world towards environmental friendly paper shopping bags. Given the preference of retail brands on parameters including paper bag strength, printability (bleached white paper that can be easily dyed to different colors), smoothness and reusability – blended Kraft paper variant has emerged as the preferred choice for most retail and fashion brands.

The continued focus of the sourcing managers on cost savings makes it even more important for them to consider industry best practices such as long term supplier contracts. This not only helps them with cost savings, but also helps the organization achieve their sustainability initiatives and enhance their brand perception.



Author



Rohit Rawal – *Senior Process Lead, Sourcing & Procurement Market Intelligence, Infosys BPM*

Rohit has around 9 years of market intelligence experience for fortune 500 clients from energy, mining, and materials industries. Rohit conducts sourcing and procurement research across multitude of direct and indirect business categories, and has been responsible for delivering custom reports with insights on demand-supply dynamics, supply chain risk assessment, sourcing strategies and best practices, by conducting thorough primary and secondary research. He is skilled in performing supplier identification and benchmarking analysis with an aim of optimizing supplier shortlisting decisions and assisting category teams in developing strategies around supply base optimization, cost savings and negotiation opportunities. Rohit holds an MBA degree from the University of Petroleum and Energy Studies.

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For more information, contact infosysbpm@infosys.com



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