



Great response to PeelClean Series



Market welcomes Billerud's papers

Last year's launch of the fourth generation of packaging paper can be summed up in one word – success. Billerud's David Shaw has met many satisfied customers. He is now working on further innovations – even better qualities are expected next year.

"The improvements in the 4th generation of sterilization papers are significant. Our customers are very pleased and sales have increased substantially", says David Shaw.

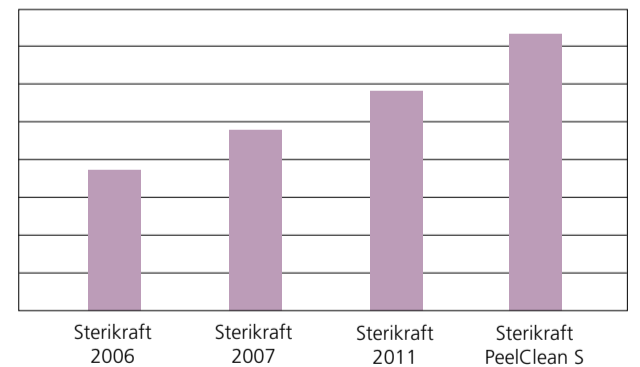
As Technical Manager at the Beetham mill, David Shaw leads the development work on this 4th generation of new products.

The five paper qualities launched over the last

12 months were the result of project work stretching over several years. Together, they represent an offer that covers all the sterilisation processes on the market – steam, gas and gamma.

"Our PeelClean qualities in particular have been highly successful. A very gratifying result as this was our goal".

SEAL STRENGTH



Paper/film heat seal strength results over four generations of medical papers.



INNOVATION FOR THE WHOLE VALUE CHAIN



BIOMASTER FIGHTS BACK AGAINST MRSA



SEAL LAB WELCOMES MORE CUSTOMERS



HIGH DEMANDS MADE ON MEDICAL PAPERS

Innovation for the whole value chain

It is said that no chain is stronger than its weakest link. With this proverb as one of our guiding principles, we at Billerud are constantly seeking to improve our products. We are fully aware of the role that sterile barrier packaging plays in the medical industry. Weak packaging qualities create problems at several stages. Good qualities lead to higher productivity and efficiency throughout the value chain, and most importantly – they protect patients' health.



This is why we look at the whole picture when we develop new products – we have been innovating together with the market for more than 40 years. Our starting point has always been that new qualities have an important function and that they benefit all the links in the value chain. The end result must always be high performance sterile barrier packaging solutions.

Today, we have come a long way, but we want to do more. With market-leading service and expert technical support, we are happy to raise the expectations placed on sterile barrier packaging. Billerud is a strong link in a complex and demanding industry driven by the same goal – to provide patient safety.

Steven Blacow
Sales & Marketing Director
Billerud Industrial Papers



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“EXCELLENT PROPERTIES”

PeelClean S for autoclaving has been extremely well received. The market segment is a large one because steam sterilisation is used in hospitals and health facilities all over the world.

“The paper has excellent properties. Our customers enjoy a very clean peel performance and an increased level of permeability. It has a high seal strength and the converters achieve a fast sealing time.” The paper’s qualities thus result in high runability and productivity – properties that are important to the market, says David Shaw.

“Cost efficiency is absolutely crucial for our customers, and we have seen that this

is achieved. It can also be sealed with a large variety of films.”

“PeelClean EO has also been well received by our customers. The combination of very clean peeling performance and high seal strength ensures that medical devices are kept sterile up to the point of use. As new customers continue to validate PeelClean EO, the order levels are increasing.”

INNOVATION CONTINUES

Even though Billerud already has several bestsellers in its product range, this is no reason to halt product development, notes David Shaw.

“We have developed medical papers

We want to create solutions that support the whole value chain

since the late 1960s at the Beetham mill, and every new generation means an improvement on earlier ones. Naturally, we will continue to move forward.” Billerud develops new qualities in collaboration with customers and film-producing partners. This enhances innovation.

“We are very reliant on the openness of our customers. Their feed-back really helps us to help them, and it is very important for us to know as much as possible about their demands and wishes. We want to create solutions that support the whole value chain.” ■



David Shaw

Paper that can replace plastic – Billerud FibreForm® is here

BILLERUD FIBREFORM CAN REPLACE PLASTICS where this was previously impossible.

It can be coated with all sorts of barriers. It can be formed, filled and sealed in one and the same process. The secret lies in its extreme stretchability.

“We have developed a packaging paper that can create unique packaging solutions”, says Peter Bergström, Product Area Manager and responsible for the development of Billerud FibreForm.

there will be a demand for FibreForm in the medical device industry.

“Because FibreForm can be barrier coated with a broad spectrum of films, purity is guaranteed. This means that there are many possible fields of application for the paper”, says Peter Bergström.

“Blister packaging solutions using FibreForm are being researched and developed and hopefully it won’t be that long before we are there”.

Today, FibreForm can already be formed in existing thermoforming machines, which also fill and seal in the same process. All that is needed is a few small adjustments to the settings, which makes converting to FibreForm very cost-effective.

“The medical device industry is conscious of the need for environmentally

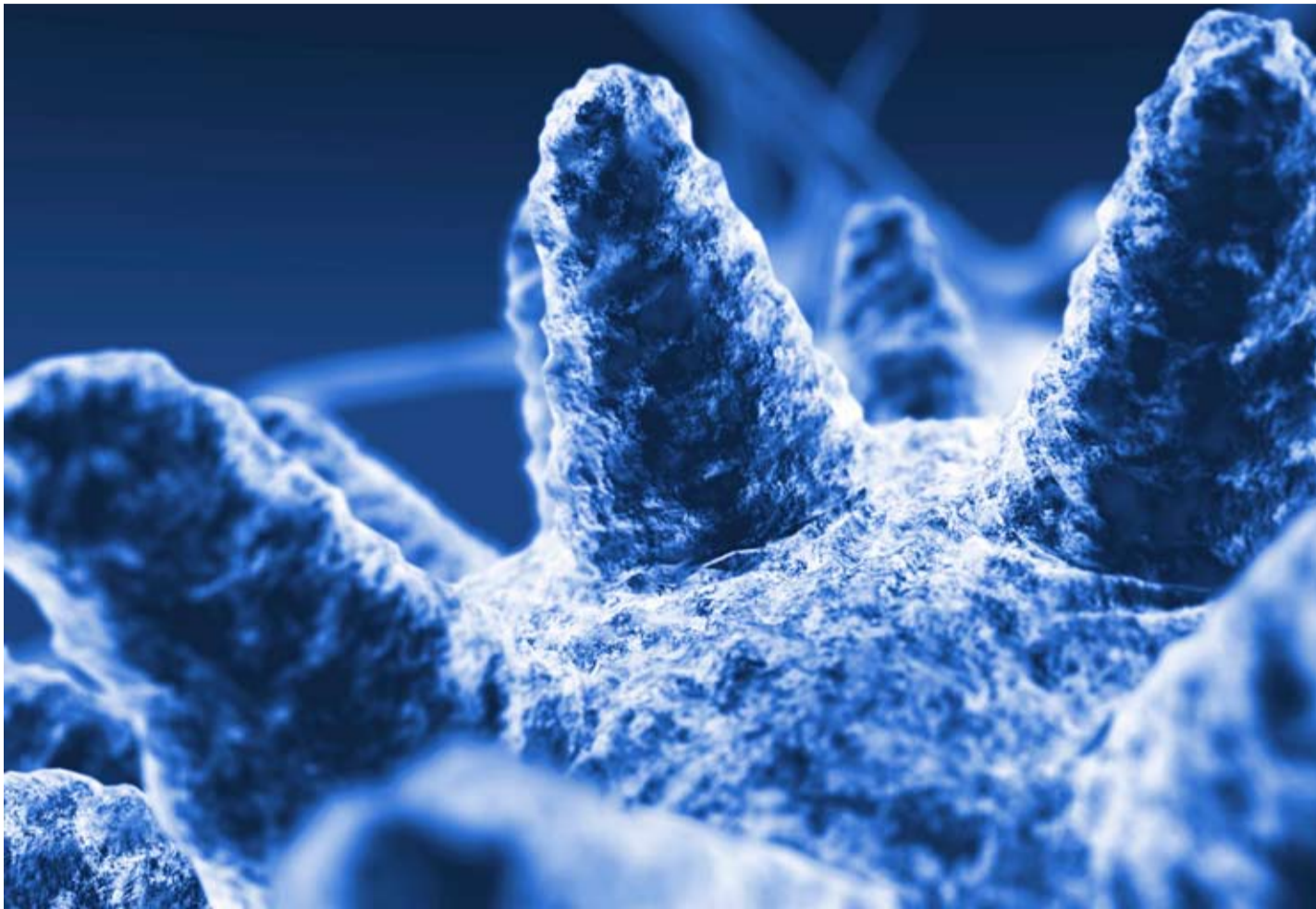
friendly and sustainable packaging materials. With FibreForm, companies are able to enhance their environmental profile.” ■

Blister packaging solutions using FibreForm are being researched and developed

FibreForm already has several fields of application such as specially designed packaging solutions, fresh food and carrier bags. Peter Bergström is very hopeful that



FibreForm offers unique packaging shapes.



MRSA replicates every 20 minutes and can survive on surfaces up to 38 weeks – but it can be stopped without being made them resistant. The silver-based additives in Biomaster can be included in plastic bed frames and door handles as well as being applied to textiles, wall paint and other wall coverings. And paper.

ADDITIVES THAT FIGHT BACK AGAINST MRSA

– now available in SteriKraft products

The world is being hit by multi-resistant bacteria – but they can be stopped. British based Addmaster’s range of antimicrobial additives has a proven effect on MRSA and some fifty other virulent bacteria. The additives, named Biomaster, are now available in Billerud’s packaging paper.

Biomaster has a proven effect on superbugs such as MRSA, as well as E-coli or Salmonella and has been tested on more than 50 bacteria in over 2,000 independent tests. Biomaster can be used on all kinds of surface materials.

“Cleanliness is extremely important when it comes to stopping the bacteria. But keeping clean is not always enough. MRSA bacteria can survive on surfaces up to 38 weeks so if an infected hand touches a clean surface the infection can spread further,” says Paul Morris, Managing Director of Addmaster, which has launched more than 1,000 products, many of which are now industry standards.

DOES NOT LEAD TO RESISTANCE

The secret behind the Biomaster solution is silver – a metal with proven antimicrobial properties.

Silver ions are released on demand and bond to the bacteria’s enzymes and cell membranes inhibiting growth and

replication. The silver ions do not kill the cell which could lead to a mutation developing resistance – they only stop it from forming new cells.

“The resistance we see worldwide comes from overuse of antibiotics, where we have used bacteria to fight bacteria. This has made a few of them stronger, extremely difficult to treat and life threatening. But our Biomaster solution provides a safe and effective method to fight them back”, says Paul Morris.

AVAILABLE IN STERIKRAFT

Billerud can now incorporate Biomaster’s additives in its Sterikraft medical packaging papers.

“Naturally, we want to do everything we can to prevent these superbugs from spreading and assist in their elimination. We are now extremely pleased to be able to offer our products treated with Biomaster,” says Steven Blacow, Sales and Marketing Director at Billerud. ■



Paul Morris,
MD of Addmaster

MRSA – Meticillin Resistant Staphylococcus Aureus

- Resistant to antibiotics and bacteria
- Often takes the form of difficult-to-treat wound infections
- Many carriers are unaware that they have been infected
- Number of deaths within Europe – minimum 25 000 /year
- World-wide – estimated figures 2 to 52 million

Source: EARSS, The European Antimicrobial Resistance Surveillance System

STERIKRAFT S

New cost-effective Medical Kraft Paper from Billerud

With optimised porosity and strength, Billerud can now present a cost-effective paper specially designed for steam sterilisation. It offers excellent runability and very good barrier properties. Sterikraft S is one of the best papers on the market, but at a lower cost.

SteriKraft S is the cost-effective alternative, perfectly adapted to the tough demands of autoclaving. Despite competitive pricing, Billerud has not compromised on quality.

“SteriKraft S satisfies all the strength and product safety demands made on medical paper, and is particularly suited to PVA and cold sealing coating applications”, says Anna Boman, Technical Support Manager at Billerud’s mill in Skärblacka, Sweden.

INCREASED EVENNESS

“The paper has excellent sheet formation with even fibre distribution and low pore size, which ensure bacterial barrier properties”, says Anna Boman.

She promises excellent sterilisation performance. Despite the fact that the pores are small, Sterikraft S allows the steam to pass easily through.

With this paper, Billerud aims to reach out to the world market and offers price-sensitive regions a very high-quality paper.

“With SteriKraft S, we can also offer an alternative for less demanding packaging solutions, which will complement our other products”, says Anna Boman. ■

FACT SteriKraft S

- MG Kraft Paper
- Suitable for direct heat seal, cold seal and PVA coating applications
- Certified in accordance with ISO 11607-1, EN 868-3 and 868-6
- High strength
- Excellent barrier properties
- Available in grammage 60 gsm



RAJEEV GOYAL, BILLERUD GULF:

“MEDICAL PAPERS MUST SATISFY THE DEMANDS MADE ON THEM”

The production of medical papers is subject to extensive regulations and hygiene control. However, papers that do not comply with toxicological and bacterial barrier regulations do appear in some parts of the world. Rajeev Goyal wants to increase awareness.



Rajeev Goyal

“Unfortunately some paper suppliers in my part of the world claim that their paper qualities are approved for medical use, but all do not satisfy the tough requirements placed on medical papers”, says

Rajeev Goyal, Director of Billerud Gulf in Dubai.

He frequently educates customers in South East Asia about the performance and

required quality of medical papers and the high demands that are placed upon them.

PROVIDES CUSTOMERS WITH TOOLS

Rajeev Goyal provides customers and end customers with tools to be able to distinguish between different qualities.

“I want to contribute to increased knowledge and give advice on the importance of using papers that are safe from a bacterial barrier and toxicological point of view”, says Rajeev Goyal.

KEY PROPERTIES OF A MEDICAL PAPER

Papers used for packaging medical devices must satisfy the International Standard, ISO 11607-1.

This standard makes high demands on the bacterial barrier, biocompatibility and toxicological properties of the paper.

“The users should definitely have their offered papers analysed and consider that a medical paper that is very cheap seldom meets the requirements. The main function

of cheap qualities is never medical”, says Rajeev Goyal, who recommends the customers to ask for proof of certification when they are offered a paper.

“It is really amazing how surprised our customers often are after presentations. Everyone I’ve talked to now fully understands the importance of using qualities that live up to standards.” ■

Seal Lab

welcomes more customers



Seal Lab, Billerud’s service laboratory, helps customers to maximise production and increase profitability. Now, more customers are welcome to avail themselves of the unique services offered.

Seal Lab helps converters and packaging producers to find a paper quality that is optimally compatible with each individual customer’s machine equipment. To be able to make the right choice, Seal Lab simulates the customer’s production conditions using its own equipment. Seal Lab’s tests have shown that it is possible to increase the rate of production in the sealing process by up to 30 per cent with the right choice of paper. Several customers have already made use of the laboratory’s services and benefited from its analysis and many of them have

switched to a paper quality that is better suited to their production conditions and equipment.

Billerud is now inviting more customers to come to Seal Lab.

“We know that Seal Lab’s analyses help to increase our customers’ productivity and, as a result, also their profitability. Naturally, we want to help our customers achieve this”, says Ole Paulussen, Sales Manager at Billerud in Hamburg, who is more than happy to answer more questions about Seal Lab. ■

NEW TECHNOLOGY PRODUCES EXCELLENT PAPER QUALITIES

The major investment in medical paper has been a success. Thanks to ultramodern technology, Billerud’s customers are now getting papers with higher qualities than ever before.

Just over a year ago, Skärblacka mill in Sweden was upgraded in order to optimise the production of MG Kraft – the paper quality behind MediKraft and SteriKraft.

Skärblacka’s investment in high-tech systems has resulted in a major improvement in important properties of papers intended for medical packaging solutions. In total, Skärbacka was upgraded at a cost of EUR 25 million. ■



HIGH TECHNOLOGY SCAN. PM7 at Skärblacka has been equipped with, among other things, a hole and spot detector, which digitally scans the paper before it is wound onto a reel.

Enhanced properties of medical papers

Seal strength 15% higher
Fibre transfer 30% lower

>> **Improved seal and peel performance**

Maximum pore size reduced by 30%
Formation of the paper improved 20%

>> **Improved microbial barrier properties**