

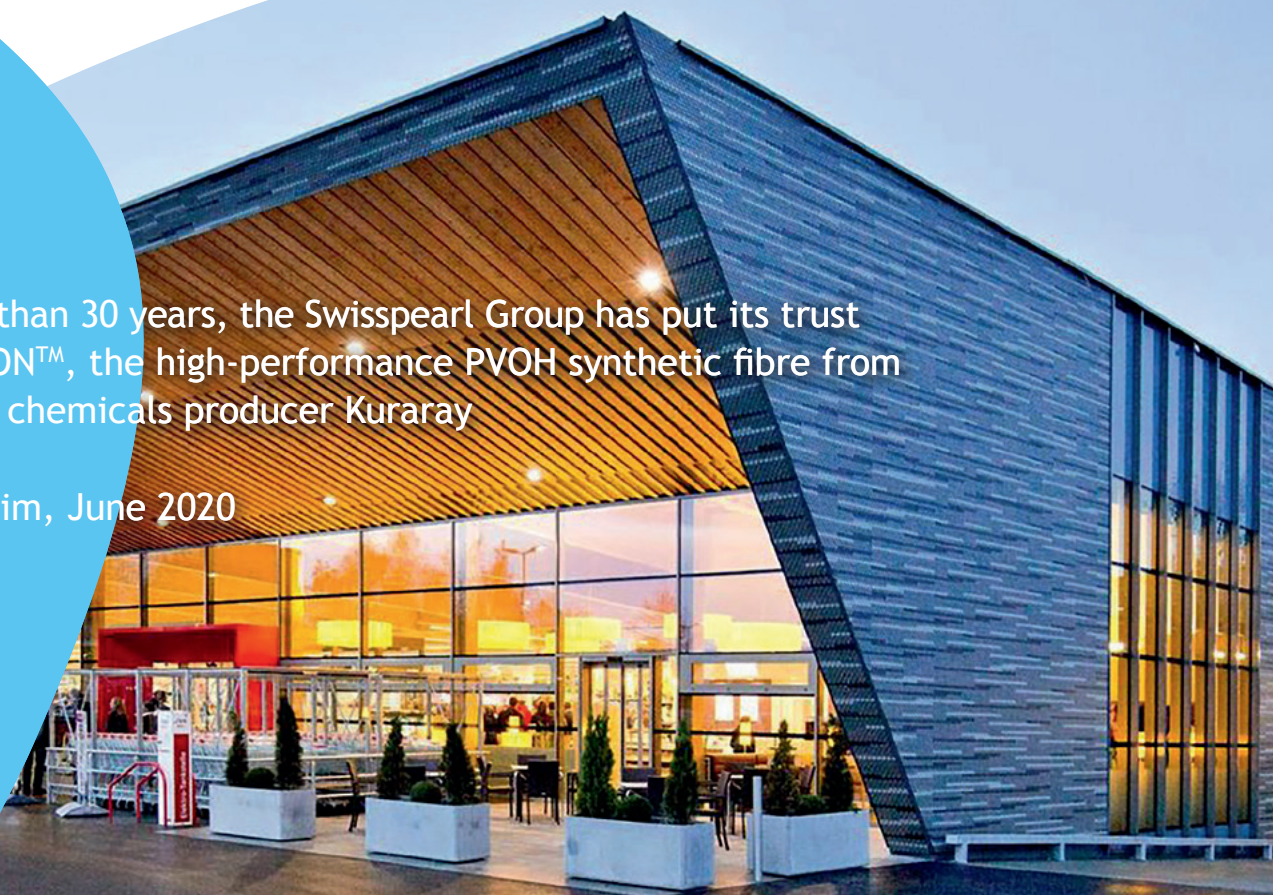


Case Study

Guarantors of global growth – Swisspearl relies on Kuraray’s quality, reliability and customer focus

For more than 30 years, the Swisspearl Group has put its trust in KURALON™, the high-performance PVOH synthetic fibre from speciality chemicals producer Kuraray

Hattersheim, June 2020



Summary

An excellent network of top raw material suppliers is very important for the successful development of the Swisspearl Group.

For more than 30 years, the Swisspearl Group has placed its trust in Kuraray's KURALON™ as a starting product for its top-quality fibre cement Eternit®. KURALON™ is added during production as a reinforcing fibre, which gives the end product – Eternit® – its high stability.

Reasons for the successful and lasting collaboration between Swisspearl and Kuraray:

- Consistently high **quality** of KURALON™, which efficiently supports the production of Eternit®.
- **Reliable** supply chain: rapid delivery of KURALON™ at all times – even if demand rises at short notice. Kuraray therefore supports reliable production planning processes for Swisspearl and Eternit®.
- Outstanding **customer focus**: Swisspearl Eternit® works directly with Kuraray's R&D team on the successful ongoing development of KURALON™ reinforcing fibres.
- **Sustainability**: using KURALON™ in Swisspearl Eternit® allows recycling and a functioning circular economy.



Kuraray and KURALON™ are ideal for Swisspearl

Client

The **Swisspearl Group** manufactures and markets high-end products made of top-quality **Eternit®**. The Swisspearl Group, with its subsidiaries Eternit (Schweiz) AG, Eternit Österreich GmbH, Eternit Slovenija d.o.o. and Swisspearl Deutschland AG, is Europe's leading fibre cement producers. A global distribution network ensures that all products and systems are available worldwide.

Swisspearl's products are based on fibre cement, a natural material that offers durable, robust, sustainable and aesthetically pleasing all-round solutions for the construction sector. At the same time, Swisspearl's products meet the highest climate protection and sustainability requirements.

As an innovation and technology leader, Swisspearl manufactures and markets high-quality products and solutions for roofs, façades, gardens, interior design, flooring, solar systems and fire prevention. Alongside durability and top quality, all products meet demanding aesthetic requirements and the highest standards of responsibility to people and the environment. That makes the Swisspearl Group a preferred partner for architects, designers and developers in the design of tasteful and sustainable building envelopes and living spaces.

From idea to international brand

The Swisspearl Group's global success is attributable to 125 years' experience in the production of high-quality fibre cement. Developed by Ludwig Hatschek in Vöcklabruck, Austria, in 1894, this visionary material has remained one-of-a-kind – lighter than tiles, cheaper than slate and better than metal sheeting.

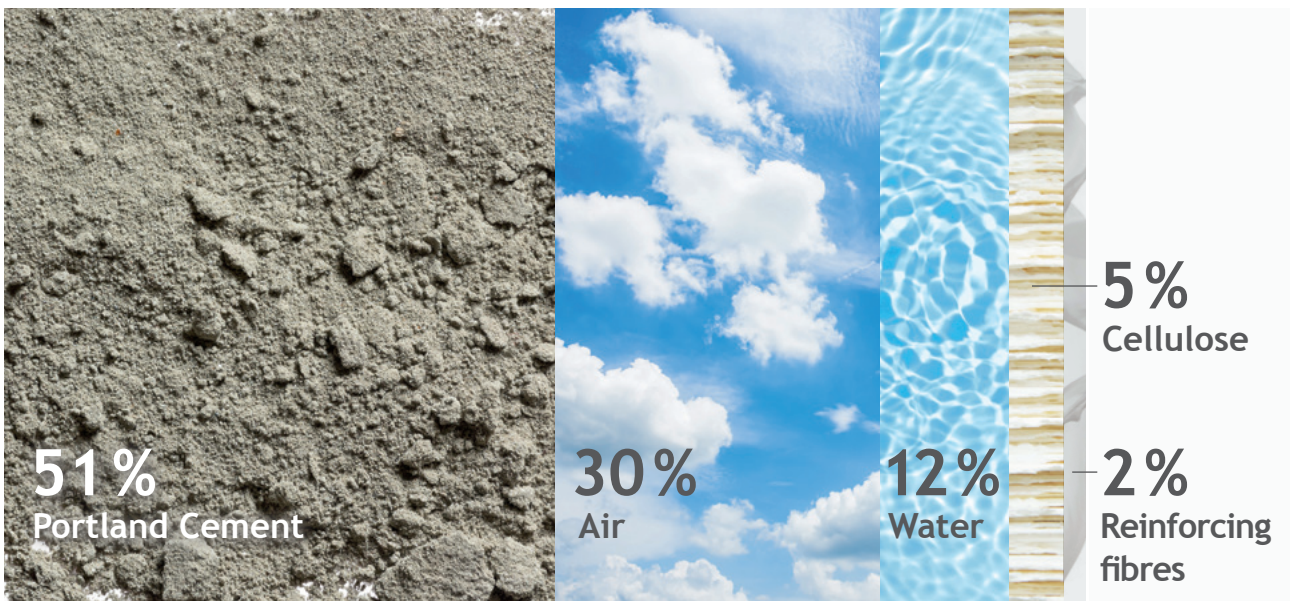
Eternit® has continued to revolutionise the construction industry right up to the present day. Its success began in 1901 when the production process was patented. The sale of patents turned fibre cement into a global success story.

Today, 1,100 employees around the world market products made from Swisspearl Eternit® in more than 60 countries. The technology is constantly being refined. A sustainability mindset that prioritises ecology and a corporate culture characterised by mutual respect and outstanding customer focus pave the way for the Swisspearl Group's future success.

Product

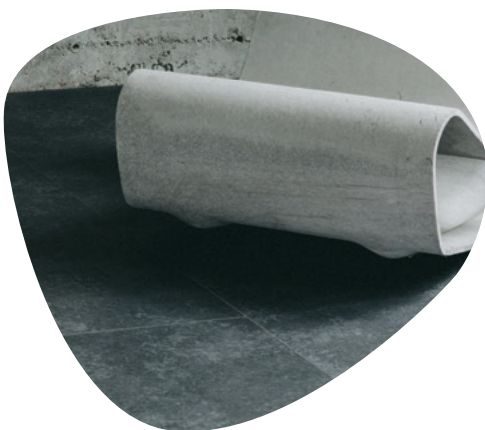
Eternit® and Swisspearl – Swisspearl’s products are based on fibre cement, a natural material that offers durable, robust and aesthetically pleasing solutions for the construction sector. At the same time, Swisspearl’s products meet the highest climate protection and sustainability requirements. Swisspearl **Eternit®** products are energy-saving in production and use.

Fibre cement is a natural product comprised of...



...which give it its high stability.

Fibre cement has been a key element in the building industry since the 19th century. It was originally developed in Vöcklabruck, Austria, in 1894 and its subsequent success is synonymous with the brand name **Eternit®**.



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Modern architecture needs to be aesthetically pleasing, durable and sustainable. That is a challenge for designers, architects and builders and makes high demands on the materials used. One product that meets all these criteria simultaneously is Swisspearl Eternit®. This unique material produced by the Swisspearl Group comprises high-quality fibre cement and stands for durable, robust and aesthetically pleasing building materials.

The strength and stability of Swisspearl Eternit® are due to KURALON™ reinforcing fibres from Kuraray. Over and above its role as a supplier of this starting product, Swisspearl values the collaboration with Kuraray because it is part of Swisspearl's global success.

Eternit® – For more than 30 years, KURALON™ has been responsible for it's strength and stability

In the 1980s, intensive research led to the development of a new technology for Eternit® to make sure it could meet modern demands for versatility and sustainability. Alongside the natural raw materials – Portland cement, air, water and cellulose – Swisspearl was looking for a reinforcing fibre that would enhance the strength and stability of the product and also meet the company's stringent ecological standards. That started with a demanding development phase during which Swisspearl tested many raw materials from different manufacturers. KURALON™ PVOH synthetic fibres from Japanese speciality chemicals company Kuraray convinced Swisspearl's product engineers. In addition to the properties of KURALON™, key factors were Kuraray's enormous commitment during development phase, its quality awareness and its professional expertise. That paved the way for a collaborative partnership that continues to this day. KURALON™ has had a firm place as a reinforcing fibre in Swisspearl products since the 1980s.

“ We have used KURALON™ as a reinforcing fibre in Eternit® for nearly 40 years. During our long cooperation with Kuraray, the product has been optimised to meet our specifications, so that it perfectly supports our processes and the properties of Eternit® – and more than meets our quality standards. ”

Gerhard Redlinger, Eternit Plant Manager in Vöcklabruck

Case Study

Kuraray's customer focus means Swisspearl is directly involved in the ongoing development of KURALON™

“Customers first” is Swisspearl's motto. The company makes high demands on the quality of its materials so that it can meet or even exceed its customers' expectations. Kuraray is a reliable partner and supports the tremendous success of Eternit® producer Swisspearl by supplying consistently high-quality KURALON™.

Stability and durability are particularly important for architecture and construction. KURALON™ reinforcing fibres provide the necessary strength. In the ongoing development of Eternit®, Swisspearl can also rely on support from the research team at Japanese speciality chemicals producer Kuraray. For example, the dispersing properties of the fibre are continuously being optimised through direct collaboration. Moreover, special end-fibres have been developed to prevent yellowing of Eternit® products. Due to the durability of Eternit® products, there were problems with the discolouration of white shades in the past. The jointly developed A8S fibre means that the increasingly popular white Eternit® products now retain their brilliant shade.

“ *Kuraray's quality standards are just as high as Swisspearl's. That helps us meet the requirements of our customers in the architecture, design and construction sectors.* ”

Michael Kiener, Head of Purchasing, Swisspearl Group AG



Case Study

Sustainable circular economy – a symbiosis of starting materials and end-products

The successful collaboration between Swisspearl and Kuraray is based on the high safety requirements of both companies. Similarly, both partners are working to reduce energy consumption and avoid harmful environmental impacts. That is important to Swisspearl: Eternit® can be returned to the company after more than 30 years for recycling and re-use in cement manufacturing. The reinforcing fibre dissolves completely in this process. Together, Swisspearl and Kuraray are therefore a good example how the circular economy can work effectively.

Fast and reliable delivery, even when demand is high

As a consequence of Swisspearl’s global success, driven by new applications and expansion into new markets, Kuraray has registered a strong rise in demand for KURALON™. There are also unpredictable peaks in demand caused by sudden damage, for example as a result of storms and hailstones. Swisspearl can always rely on its partner Kuraray to meet peaks in demand for KURALON™ quickly and flexibly.

The long-standing and good collaboration between the companies has also enabled Swisspearl to introduce new applications and access new markets. The latest example is the development of Eternit® flooring – naturally with KURALON™ to increase the stability and tread resistance of the new products.



Kuraray

Kuraray – Established in 1991, Kuraray Europe GmbH is based in Hattersheim, near Frankfurt am Main, Germany. In 2018 the company generated annual sales of over EUR 690 million. It has 700 employees in Germany at its German sites in Hattersheim, Frankfurt and Troisdorf. Kuraray is a global speciality chemicals company and one of the largest suppliers of polymers and synthetic microfibres for many sectors of industry. Examples are Kuraray POVAL™, Mowital®, Trosifol® and CLEARFIL™. Kuraray Europe also has 200 employees at six other European sites. They also work on the development and application of innovative high-performance materials for a wide range of sectors, including the automotive, paper, glass and packaging industries, as well as for architects and dentists.



Kuraray Europe is a wholly owned subsidiary of the publicly listed Kuraray Group, which is based in Tokyo, Japan, and has around 10,000 employees worldwide and sales of EUR 4.8 billion.

KURALON™ – KURALON™ is a high-performance synthetic fibre made of polyvinyl alcohol (PVOH). It is used in many industrial applications because of its unique properties and excellent performance. Kuraray is the world's largest producer of polyvinyl alcohol fibres and resins. KURALON™ is available as a staple fibre, spun yarn, short cut fibre and filament.



Key properties of KURALON™

- High tenacity
- Low elongation
- High Young's modulus
- Low creep
- Low shrinkage in hot air
- Chemical resistance
- Affinity for rubber and resins
- UV stability
- Hydrophilic
- Water-soluble types available