

A CONVERSATION WITH FLORIAN NUSSBAUM

CEO AND OWNER, NUSSBAUM GROUP, MATZINGEN, SWITZERLAND



Aerosol cans made of 100% post-consumer recycled aluminum from Nussbaum have been available in stores since the beginning of December 2021. To manufacture this product line, the Swiss packaging specialist uses only recycled aluminum, which is extracted from beverage can waste. Aerosol Europe spoke to Florian Nussbaum, CEO and owner of the Nussbaum Group.

AEROSOL EUROPE: Mr. Nussbaum, the first aerosol cans made exclusively from recycled beverage cans have been on the market for several months. How satisfied are you with current developments?

Florian Nussbaum: With this innovation, we are entering new dimensions of sustainability, and this fills me with great pride. The Nussbaum Group is the world's first producer of aluminum monobloc cans that is able to manufacture cans without primary aluminum – industrially and in large quantities. There are a number of products

on the market that use PCR material, but none of these products are 100% PCR and none are officially certified according to ISO 14021. Making the use of 100% PCR aluminum industrially reliable and without any loss of quality and overcoming existing paradigms were incentives for us and challenged our technicians' ambition.

Thanks to sound technical expertise and the unbridled will of everyone involved, we finally succeeded in making a breakthrough. However, it was also crucial that Beiersdorf, as our development partner, quickly recognized the potential for this innovation and that we were able to convert entire product lines to the new standard. In the meantime, more than 30 million pieces are already on shelves across Europe. This reduces CO2 emissions by a powerful 96% due to 100% Nucan-PCR products. Not only does this look good on the shelf, but it is also increasingly a key selling point for consumers who want to actively reduce plastic and energy waste.

The aluminum packaging is already sustainable per se, as 75% of the recycled aluminum is still preserved in the value added and is infinitely recyclable. Therefore it is important that this valuable material not be lost and that we strive for recycling rates that are as high as possible. For this way, we can preserve the original high energy expenditure for the extraction of aluminum for the benefit of society. Thanks to low energy consumption (4%), the energy expenditure can be amortized indefinitely.

The use of 100% Nucan-PCR material reduces CO2 emissions in the produc-

tion of the cans by 96%, which undoubtedly makes aluminum packaging much more attractive and competitive. We started with series production in the fourth quarter of 2021, and we have used around 1,000 tons of PCR aluminum to date. This spared production of more than 6,200 tons of CO2. For this, you could drive around the world around 455 times in a medium-sized car. This is a decisive step forward in our sustainability strategy for zero-emission production.

AEROSOL EUROPE: The term "PCR" is currently on everyone's lips. What does "post-consumer recycled" mean for Nussbaum?

Florian Nussbaum: Our Nucan-PCR aluminum consists of 100% beverage can waste, which has been recycled by consumers via the collection of recyclable materials. We do not use primary aluminum, nor do we use industrial waste such as production sections, lithoplates or cable wires – unlike other market participants. Since the beverage cans are collected and processed in a variety-specific and local manner, complex sorting processes and long transport routes are no longer necessary – a further advantage for Nucan-PCR aluminum. Thanks to tool and process innovations, we can process the high alloying content in the PCR material and at the same time reduce the material we use. We are the only aluminum can producer that offers such a can-to-can upcycling. We are proud that we have recently been awarded DIN EN ISO 14021:2016 certification according to environmental marking type II for our two German production sites. An independent accredited testing institution has carefully

examined the value chain and the procedure and confirms transparency and traceability by issuing the certificate. This is important because it is not easy for our customers to compare different definitions and recycled content from different vendors. DIN EN ISO 14021 provides clarity in this regard.

AEROSOL EUROPE: In which areas do you see the greatest growth opportunities for recycled aluminum cans?

Florian Nussbaum: All companies that have recognized that true sustainability cannot be replaced by greenwashing and that rely on Swiss quality and reliability will not be able to avoid 100% Nucan-PCR. At the moment demand is very high, but skepticism or the higher price still prevents some customers from placing their trust in sustainability. I am pleased, however, that many European brand owners have already successfully tested products in order to be able to put them on shelves and in customers' hands quickly. We have received a particularly high number of inquiries from our core segment, the personal care sector. The pharmaceuticals sector is more cautious, partly because its procedures take more time.

In general, we note a high affinity for sustainable products – including their packaging – among consumers around the world. As a result, demand from other sectors, be it food packaging or technical articles and household aerosols, is increasing steadily. The sustainable use of resources is currently a major concern for our society, and we believe that this is not a fad, but rather a trend that will continue. Therefore, in addition to the 100% Nucan-PCR cans, we also offer refill products. Continuous and reliable supply is increasingly important to our customers in these uncertain times.

AEROSOL EUROPE: You mentioned the issue of refilling. In addition to classic aerosol cans, Nussbaum also produces other aluminum packaging.

Florian Nussbaum: In fact, our refillable and reusable cans, such as spice shakers, can boxes, powder cans, and our

screw cans, are currently attracting a great deal of interest. The latter are celebrating a real revival. The screw cans have been part of our product portfolio for exactly 30 years and are more popular now than ever. Companies have discovered the potential of refillable packaging, particularly in the area of personal care. Today, consumers are increasingly turning to products that can be refilled easily and automatically after use. We feel this trend and see that it has opened up the market for products that were not found in aluminum a few years ago – shampoo or detergent, for example.

We also have great expectations for our latest development, the aluminum roll-on deodorant. Traditionally, deodorants have been made of glass or plastic. Our alternative made of aluminum is about 75% lighter and holds 50% more product with the same format. And if you accidentally drop the deodorant in the bathroom, there will be no damage to the sink or tiles. That's a big advantage as compared to the glass version. After use, the deo can be disassembled into its individual parts and the individual components can be recycled.

Our non-aerosols can also be made of 100% Nucan-PCR aluminum on request.

AEROSOL EUROPE: What environmental issues is Nussbaum currently dealing with – apart from aluminum recycling?

Florian Nussbaum: Climate protection and the resulting adjustments to our processes are of great importance to the Nussbaum Group. Starting in 2030, we want to produce climate-neutral packaging solutions. In order to achieve this ambitious goal, we are constantly making adjustments in the areas of energy management and mobility, as well as process optimization. We rely on continuous monitoring as well as on a responsible purchasing and investment policy. Here, regionality is also important to us. We use materials and technologies that are as environmentally friendly as possible. For example,

we have been using mineral oil-free printing inks for about 4 years; these consist of more than 60% vegetable, renewable components. We are also working continuously with our suppliers on environmentally friendly options with regard to the coatings used. On request, we use BPA N.I. varnish and paint systems, and we offer formaldehyde-free and water-based paints. Our production plants in Germany are certified according to ISO 50001 in the field of energy management, while our Swiss headquarters is affiliated with a voluntary program for climate protection and energy efficiency.

AEROSOL EUROPE: What do you think the future holds for the development of demand for aluminum packaging?

Florian Nussbaum: The material aluminum is becoming more and more established as an environmentally friendly raw material, and it is winning people over thanks to its low weight, stability, and excellent product protection. We are therefore convinced that the use of aluminum packaging will increase; on the one hand to reduce plastic waste, and on the other because of the product properties.

Currently, the explosion in energy and raw material prices is roiling the market and the price of aluminum is no exception. However, the price increase here is much lower than for tins. We are optimistic that this storm will also pass. Our company looks back on a nearly 60-year history, so it's not easy to fluster us. Our passion is and will continue to be the development and manufacturing of aluminum packaging solutions and our dedicated team is working on this every day.

AEROSOL EUROPE: Mr. Nussbaum, thank you for this conversation.

