

Creating Rust-Proof Packaging for NSK

NSK is the global leader in industrial machinery bearings, precision machinery and automotive components with manufacturing plants around the globe. They supply a number of leading car manufacturers which means that their customers expect excellent service, all the way down to the smallest detail to ensure an efficient shipping process.

Due to an increase in lead times, NSK's Peterlee plant decided that something needed to change – and so turned to Smurfit Kappa in Chesterfield for some assistance. In fact, Smurfit Kappa had previously been working with them, laboriously sampling packaging formats one by one. The global situation surrounding Covid-19 added urgency and products that were previously thought to be sound came under scrutiny.

The challenge

Because many of their products are shipped overseas by boat, most of their packaging has a particular coating on the board – Paraten - which is a rust prohibitor. The global supply difficulties got the Smurfit Kappa Chesterfield team in an innovative mood; they were ready to tackle any dilemma. So, they suggested a solution to the Paraten problem, experimenting with a volatile corrosion inhibitor (VCI) called Vaportech.

Vaportech has several advantages over the alternatives. First, it's easy to apply, essentially being printed straight onto the corrugated board in Chesterfield. This reduces lead times and allows Smurfit Kappa to supply NSK with their packaging in a quick turnaround period. Furthermore, it's eco-friendly. Not only does it not create any waste through the printing process, but it's also water soluble, safe for the environment and entirely recyclable.

Using Vaportech means Smurfit Kappa can craft the packaging from beginning to end in Chesterfield, with total control of the production process. This can also help in reducing both lead times and enables the Smurfit Kappa team to produce exactly as much, or as little as required. As a final bonus benefit, Vaportech is bought in the UK – and cheaper to produce than the board containing Paraten.

NSK quickly agreed to trial Vaportech. The result was packaging that could withstand even the roughest of seas and increased trust from NSK in Smurfit Kappa's capabilities.

Working together

Smurfit Kappa Chesterfield recognised the potential to innovate with NSK. They knew they had to be creative and strategic in their approach, as supply chains across the UK were affecting Smurfit Kappa too. Working entirely in-house, the Smurfit Kappa Chesterfield sourced, printed, die-cut, assembled, and delivered their first prototype for NSK within two weeks.

This quick thinking – and even faster turnaround – won the NSK team over. Using one design, they had proven themselves – and NSK tasked them with redesigning around 80% of their corrugated lines.



Trouble at sea

It wasn't all smooth sailing for NSK. Although their main packaging had been dealt with, they were still facing delays; this time in the wooden shipping components of their shipping process, like pallets.

Once again, Smurfit Kappa had a solution. They suggested using Hexacomb with corrugated posts. Hexacomb is a unique paper-based alternative to materials like wood; it offers impressive strength and lightness. It's based on the structure of honeycomb which effectively absorbs shock and provides cushioning for products in transit.

It's rigid, so it can support heavy materials. It also stabilises loads, reducing or even eliminating product shift. And because it's paper-based, it's 100% recyclable, made from FSC-certified paper.

Working collaboratively, Smurfit Kappa Chesterfield and NSK have improved the packaging offering by leaps and bounds. On top of that, Smurfit Kappa are always looking to improve; the team at Chesterfield are currently looking into other ways to help NSK reduce lead times further.

“Over the coming few years, we hope to work closely with NSK to optimise their packaging fully and continue this productive working relationship.”

Mike Broad,
Sales Manager at Smurfit Kappa Chesterfield.

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