
Kemind to Improve the Corrugated Board Industry with Graphene Enhanced Glue Concepts

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In America alone close to one hundred billion cardboard boxes are produced each year. By adding graphene to their new glue formula for corrugated boards, the worldwide operating chemical company Kemind managed to increase production efficiency as well as improve quality for various corrugated board products. Kemind sees great potential in graphene and plans on extending the use of the material in more application.

[Kemind](#) is an Italian company that produces and supplies solutions and concepts based on chemicals for industrial processes, for example glue, paint and lubricants. The company is primarily involved within the industries of pulp and paper, water treatment and corrugated board products. Their new graphene-enhanced glue concept was given the name Kemigraph® B.

"One of our strengths as a company is our ability to develop customized solutions for end users. We also have a well-functioning R&D and agents in Europe, Africa and the Middle East which allow us to help our customers hands on", says Paolo Massarutto, Sales Director at Kemind.

Located in Parabiago, in the outskirts of Milan, the company, as many others worldwide, had a rough start to 2020 due to the pandemic. This however did not stop Kemind from operating. The company continued working, celebrated 35 years in business and became a sympathizing member of The European Federation of Corrugated Board Manufacturers (FEFCO). Over the past years, Kemind has also been developing and commercializing a new glue concept.

"We got a request from one our customers saying that they wanted to increase the mechanical actions of the glue concepts for their corrugated boards. We did a fair bit of

research and came across graphene, which seemed like a possible candidate to help us achieve that, so we decided to try it", Paolo Massarutto explains.

Lower drying temperature makes a huge difference

By adding [2D fab](#)'s graphene to the glue formula Kemind managed to increase production efficiency, reduce costs, and improve quality for various corrugated board products. Their new graphene-enhanced additive glue concept was given the name Kemigraph® B.

"With Kemigraph® B we can increase production speed with 20-30% and reduce cost in production since the temperature needed to dry the glue is a lot lower. Another important parameter that Kemigraph® B contributes with is that it reduces the quantity of glue needed. The benefits are many", says Paolo Massarutto.

Corrugated boards are used for packing food, furniture and all sorts of items sold and bought not least via e-commerce. And it is a big industry. In America alone close to one hundred billion cardboard boxes are produced each year. Since Kemigraph® B increases the mechanical resistance in the glue it is especially suitable for heavy packaging.

"It is also very useful for fruit and vegetable boxes that need to be kept cold. When you put the boxes in the fridge regular glue can dissolve. Kemigraph® B however, in synergy with the WS Resins used for this scope, helps to keep the glue intact and prevents ungluing of the boxes", says Paolo Massarutto.

A knowledge-based and rewarding collaboration with 2D fab

Kemigraph® B has been in commercial use since late fall 2019, and Kemind are continuously buying graphene from 2D fab. According to Paolo Massarutto, the collaboration with 2D fab has been of great value for Kemind.

"Without the expertise of 2D fab we would not have been able to create this product. We

started this project together and we have always had a good collaboration. We work together and that is very important to us".

Kemind holds the largest market share for chemical concepts for corrugated board products in [Italy](#) and are aiming to become one of the biggest players on the European and Asian markets within a couple of years. The company sees great potential in graphene and plans on extending the use of the material by testing it in more applications.

"We are examining how we could use graphene in other sectors and markets, for example in paint, lubricants, and paper production. We have technical meetings with 2D fab every month to study what could be possible. We truly believe we can solve many future problems with graphene", says Paolo Massarutto.

Read the [original article](#) on 2D fab.