



# Not Sticking Not Possible!

Exclusive interview with KLEIBERIT's  
Wood/Plastic Department and the  
Application Technology Department Wood



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KLEIBERIT Adhesives located in Weingarten Germany considers itself a “Specialist Amongst the Adhesive Manufacturers”. What this focus on specific applications can mean, was highlighted in our discussion with Mr. Holger Scherrenbacher, Business Unit Manager - Wood and Plastic, and Dr. Peter Wulzinger, Application Technology Manager - Wood. The example of flat lamination shows that KLEIBERIT offers or develops successful solutions for every question.



▲ Holger Scherrenbacher

**KLEIBERIT is a successful company in the adhesives industry. What is the basis for the positive development of your company?**

Holger Scherrenbacher: Our company is managed by the owners now in the second generation. That creates a type of responsible management. With ap-

proximately 450 qualified employees, we ensure product leadership on one hand, and on the other hand we have a close network with excellent exchange of internal know-how and short decision making channels.

Dr. Peter Wulzinger: And we are investing in the future. That begins at recruitment of junior staff and continues in the human resources development. In this way we support our customers worldwide with over 70 Sales Engineers. Our internal Customer Service Representatives handle the respective markets in their corresponding native language.

Holger Scherrenbacher: On the product side, certification systems for quality, environment and engineering efficiency support our market leadership. To maintain our lead, we invested in a state of the art Technical Center in 2008. This enables us to set the standards for the industry, handicraft and trade.

**It can be assumed that the Technical Center provided decisive momentum for the development of PUR adhesive systems for flat lamination?**



▲ Dr. Peter Wulzinger

Dr. Peter Wulzinger: Generally speaking, yes. Our company is known for formulating PUR hotmelt adhesives among other things. We are ahead of the game - especially in applications for wood, plastics and furniture. This know-how builds up trust with our customers and interested users. They come to us with





important input. Or raise the famous "impossible" questions...

Holger Scherrenbacher: The flat lamination success story began in a similar way. Surface finishers are not the only ones who have to produce "faster, more cost efficient, individual and better". That is extremely challenging. PUR adhesives, with their advantageous properties, are one piece of the puzzle allowing users to meet these demands. Another determining factor is the machine technology. Think about PUR in combination with lamination technology and we inevitably come to the next step – flat lamination!

**Flat lamination with KLEIBERIT hotmelt adhesives has developed into a real fast seller. What other advantages can your customers expect?**

Holger Scherrenbacher: Our business volume in this market segment has tripled within the time frame of year-end 2009 and year-end 2013. We are clearly taking a leading role. Over one third of our flat lamination sales are generated in

interior design, the rest is spread across façade cladding and automotive.

Dr. Peter Wulzinger: From the user's perspective, the first key question is: am I finishing a panel surface with a solid surface material or with a liquid application, such as with HotCoating? If the decision is for the first with foil or papers, then it is a question of reasonable equipment technology. If we then further differentiate the conventional range of materials, the problem regarding the right finishing technology becomes even more important. All of these are rely on the ideal adhesive choice.

**Which is how we came to discuss the advantages of polyurethane hotmelt adhesives...**

Dr. Peter Wulzinger: Correct. After being in the market for several years, EVA hotmelt adhesives or PVA adhesives have known limits; PUR hotmelt adhesives offer several very beneficial properties. This includes the long open time, which can be set according to requirements, as well as the high initial and end strength. PUR is a water-free system, so swelling

is avoided e.g. during bonding of honeycomb in lightweight. In addition, PUR hotmelt adhesives feature a wide range of adhesion on several plastics and metals. PUR systems set according to the temperature and result in an irreversible glue line due to cross linking. They allow for entirely new material combinations, keyword: impermeable layers.

**Your enthusiasm is contagious! So it must be allowed to ask the question (which can't be taken literally): What is it about flat lamination that makes it so "sexy" for the user?**

Holger Scherrenbacher: The combination of PUR hotmelt adhesive and lamination equipment opens up completely new options for diversity of materials, for the ability to combine different materials, production speed, efficiency, flexibility in production. To put it briefly, you could perhaps say that flat lamination is simple, variable, customizable. The prerequisite for this is of course the necessary know-how during the adhesive selection. They keyword impermeable has already been used once – surface tension and



◀ (left, middle) In just a few quick steps, a new adhesive slug lays between the heated dosing and application rollers, melts in a short time, and is ready to apply.

◀ (right) Cleaning made easy. Accelerators reduce the viscosity of the PUR and the adhesive simply drips off.

polarity also belong to this way of thinking. But that is why we are there for our customers!

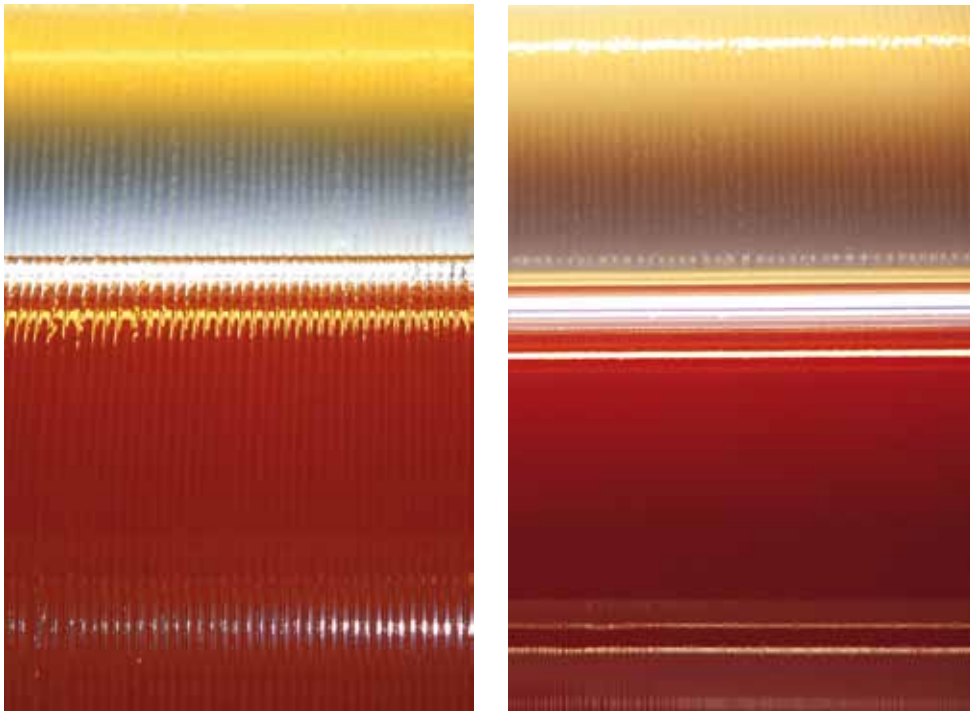
Dr. Peter Wulzinger: I could use a whole list of additional superlatives: high temperature, moisture and water resistance, UV stability, transparency, flexible glue line, simple processing and equipment cleaning. Under these conditions, there is almost nothing which doesn't work: you can bond sandwich elements as well as lightweight panels, produce multi-layered foam panels or laminate decorative panels with ABS or PET materials with veneer or glass.

Holger Scherrenbacher: The keywords ABS and PET make it clear: PUR

The deco material is then either applied as a single piece or as rolled material from the roll. Wide slot nozzles are preferred when the adhesive is applied onto the rolled material. Pressing takes place with a calendar roller.

Dr. Peter Wulzinger: How the adhesive is applied is surely one aspect. Selecting the right adhesive is even more important for a carefully defined application. In the meantime we offer more than 20 different types of PUR hotmelt adhesives for flat lamination – not counting customer specific formulations! That allows for a wide range – from high gloss foils under 0.7 mm up to honeycomb panels with 100 mm thickness and more.

Holger Scherrenbacher: Times are changing quickly and the product cycles are short. That doesn't stop at interior design. With our PUR hotmelt adhesives for flat lamination, we offer exactly the right answers. Polyurethane adhesives from KLEIBERIT are unrivaled in terms of flexibility and the diverse fields of application. **Thank you for the interesting discussion.**



◀ The different speed of the application and dosing rollers regulates the PUR hotmelt application quantity.

hotmelt adhesives are practically designed for flat lamination with transparent or high gloss foils! In addition, we offer intelligent solutions for different foil thicknesses, required hardness levels, tailor-made for equipment from various manufacturers with different application processes.

### **You mean roller coater vs. wide slot nozzle application?**

Holger Scherrenbacher: Exactly. The application temperature of PUR hotmelt adhesives is between 120°C and 140°C. Roller systems are preferred when the adhesive is applied onto a carrier substrate.

### **High gloss has been mentioned several times already. This type of surface is currently "in". But what is the future with PUR hotmelts and flat lamination – where are the markets heading?**

Dr. Peter Wulzinger: We are noticing that companies worldwide are switching from water based systems to PUR. Manufacturers are becoming more experimental and the boundaries of the traditional processes are disappearing – as is the case with ABS. And with the individualization of decors, companies are increasingly switching from lacquer technology to flat lamination.