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Kleiberit HotCoating for gloss board upgrading on new PG Bison line

Local board producer PG Bison reports that it has invested in a new high volume ultraviolet (UV) gloss production line that uses German adhesives specialist Kleiberit's unique polyurethane (PUR) Hotcoating product.

The new line which is a first on the African continent, will initially be used to upgrade PG Bison's signature range MelaWood melamine faced board products. The complete range of PG Bison products will later also be available in gloss options. The technologies incorporated into this line include sophisticated heating, cleaning and sanding machinery as well as the PUR coating product, UV curing chambers and a smart stacking system.

The Hotcoating PUR product from Kleiberit plays an integral role in the success of this production line.

Kleiberit's PUR Hotcoating is a unique coating product that is modeled on reactive hot melt systems. Hotcoating is solid at room temperature and is melted with a pre-melter before being applied to a substrate.

A chemical process called cross-linking, which is a reaction between the PUR coating and humidity in the air, results in an extremely strong bond and finish that is shock and wear resistant.

In fact, tests by Kleiberit show that the cured HotCoating has a durability rating of AC 3 as set out in the DIN EN 13329:2006 specification for laminate flooring and elements with a surface layer based on aminoplastic thermosetting resins. An

additional thin layer of Kleiberit's UV curing Topcoat, which is applied inline, allows for precise variations in gloss level and variations in colouring. In addition, it allows the PUR to cure over a longer period without damage owing to the UV Topcoat's immediate scratch resistance.

Kleiberit GM for South Africa Bradly Larkan explains that the company's HotCoating technology offering is universal and meets the requirements of many markets in the furniture industry especially those specialising in high end kitchens.

He adds that at the same time the cost effectiveness of the finished product can also compete in the mass market against other high gloss technologies.

Kleiberit showcased its HotCoating technology during the world renowned Ligna trade fair in May. It was at this event that PG Bison, Kleiberit and several other suppliers finalised the momentous agreement to implement the new high gloss line. Apart from the significant development with PG Bison, Kleiberit's overall feedback from Ligna was exceptionally positive.

"Our stand at Ligna was a great success. We also took some visitors to see a fully operational HotCoating line at our demo-facility near Hannover. The massive interest and positive feedback about the HotCoating product is a testament to the



An example of boards finished with Kleiberit HotCoating



Kleiberit HotCoating can be used to upgrade standard chipboard panels into a white super high gloss finish



Hotcoating DesignEdge high gloss applied seamlessly to the edge of a postform substrate

system's global significance and unrivalled success." Larkan notes that the customers who visited the demo-facility were most impressed by the ability of the HotCoating to upgrade standard chipboard panels into a white super high gloss finish.

"A super white high gloss finish is something that is notoriously difficult to achieve. However, our coating product and the correct application machinery solves this common problem without a hassle.

"This offers many opportunities for manufacturers to add value to various end use applications. An example of producers who can benefit include entry level furniture, kitchens, bathrooms and household parts and furnishings manufacturers."

Further, Larkan says that it is not only Kleiberit's high quality products, but also its commitment to service, that has helped it to excel in the market.

"Our service offering covers many aspects of the process. We enable customers, operators and engineers to become familiar with the technology before the start-up of any fully commissioned production line.

This includes off site practical and theoretical training as well as on site start-up training that covers all aspects of the production process, Health & Safety Training, housekeeping, trouble shooting and process control.

"This enables the customer to start producing AAA grade boards right away. This process also significantly reduces the amount of rejects and brings streamlined process knowledge to all parties involved.

"Customers are buying into a complete package of service, technical support and process improvement, which enables them to start selling finished products into the market immediately with confidence," stresses Larkan.

PG Bison CEO Gerhard Victor says the company investigated various gloss options during the past four years and kept a close eye on the development of Kleiberit's Hotcoating product.

"We are of the opinion that this is the best, fit for purpose gloss solution currently available for the mass market," notes Victor. He adds that PG Bison's objective is to make it as easy as possible for its customers to be efficient, profitable and to grow.

"Boards coated with Hotcoating gloss are easy to use and can be upgraded into furniture without much difficulty. It will also be easy and convenient for customers to acquire these gloss boards from us in a wide range of contemporary colours."

In conclusion, Victor stresses that the new line will enable PG Bison to offer its customers a diverse range of locally manufactured gloss products that will be readily available and affordable.

Kleiberit DesignEdge for curved boards, postform tops and digital printing

An increasing number of panel producers as well as furniture manufacturers and demanding interior contractors are switching to the Kleiberit Hotcoating technology.

On the one hand especially for finishing melamine surfaces, and on the other hand also in combination with digital printing technology. The unsurpassable adhesion of Hotcoating to melamine surfaces is the precondition for using the complete variety of designs and the price advantage of melamine coated panels and to finish these panels with an excellent surface in terms of high gloss, depth effect and scratch resistance.

Especially in the design of such furniture and building components, there is often a requirement for a seamless and consistent design between the surface and the edge. Hotcoating DesignEdge now offers the possibility to extend the highest quality Hotcoating high gloss surface seamlessly to the edge of the substrate.

Hotcoating's excellent flexibility enables these finished melamine surfaces to be formed in the direct postforming process.

In combination with digital printing, it is also possible for a completely unique design to flow from the surface to the edge without any glue line or change in gloss level. This provides processors of such panels with new dimensions and design possibilities in terms of seamless design of surface and edge.

In the meantime, the established direct postforming process has been optimised so that even the smallest radius is possible, and the adhesive systems specially designed by Kleiberit are ideally suited for this.

Classic high gloss surfaces quite often reach their limits, on the one hand because of the high coating thickness and on the other hand because of the structure which is often crystalline and hard making it almost impossible to form a small radius without cracking.

The Hotcoating high gloss process features the following combination of properties:

- Reliable adhesion to melamine.
- Excellent mirror and depth effect with a comparably low layer thickness.
- Extremely tough elastic and highly flexible property of the Hotcoating layer.
- Best micro-scratch resistance (steel wool type 0) with extremely good shock resistance.

These properties are the conditions for also being able to process melamine panels, which have been finished with Hotcoating high gloss, in the direct postforming process.

This opens up another dimension in regards to design possibilities in which curved components can also be produced with Kleiberit DesignEdge. The good properties of Hotcoating enable the subsequent bending and production of lightweight components which can be used for example in caravan interiors.

Once the new high gloss line is operational, PG Bison will have the option of using Kleiberit DesignEdge on its new 3 mm profile Formica Lifeseal Worktops, which become available in August this year.

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**For bookings and
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