

Kallima

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Manufacturing Excellent Quality Inside & Out

The fact is, Kallima® Coated Cover C1S Plus is made with less fiber (more bulk/higher yield) and provides exceptional quality. You can expect the same printability, smoothness, internal bond and strength as any of the competitors' higher density products. Ultimately, the properties of Kallima® Coated Cover C1S Plus make it better than many single-ply SBS board products.

How is Kallima® Coated Cover C1S Plus able to do this? The answer is in the three-ply construction. The pulp in the middle ply is the key to lighter weights without sacrificing quality. See below for a detailed description of Kallima's three-ply construction.

Pulp

Does Kallima® Coated Cover C1S Plus contain any TMP?

The simple answer is NO. TMP is an abbreviation for thermomechanical pulp which is primarily used in the production of newsprint and mechanical papers. Thermomechanical pulp has a very low brightness level and yellows with exposure to light due to the large amount of residual lignin that is present. This type of pulp is not suitable for high quality commercial printing grades such as Kallima® Coated Cover C1S Plus. Fully bleached high yield pulp, as used in Kallima® Coated Cover C1S Plus, is brighter and stronger than thermomechanical pulp (TMP) due to bleaching and chemical additives. Products that use TMP can be easily distinguished from fully bleached products such as Kallima® Coated Cover C1S Plus; if you split a TMP product apart, you will see a yellow middle inner layer.


Three-Ply Construction

The two outside plies

The two outside plies of Kallima® Coated Cover C1S Plus use the same type of pulp as a solid single-ply SBS product. These layers contain bleached kraft pulp (BKP), which is sometimes called bleached sulfate pulp (BSP). The two outer plies use primarily hardwood to maximize smoothness and printability.

The middle bulking ply

The middle ply is also bleached, but to maximize bulk, this pulp is different from the outer two plies. This high yield pulp is fully bleached. This is why when Kallima® Coated Cover C1S Plus is split apart, it looks like a solid single-ply SBS product, with all plies appearing white and bright.



High yield pulp is not thermomechanical pulp (TMP).

Kallima® Coated Cover C1S Plus is not a TMP sheet.

Ply Formation

The three plies are brought together when the fibers are still very wet on the four-drinier. They form a very strong bond through hydrogen bonding, which is the same force used to hold together a single-ply sheet. Starch is also added to give additional strength. For this reason, it's hard to tell a single-ply sheet from a multi-ply sheet; both sheets are equally hard to split apart and once separated, there is little evidence of the various plies because they are firmly held together through fiber bonding.

How does the middle ply affect the color fastness properties of Kallima® Coated Cover C1S Plus?

Since Kallima® Coated Cover C1S Plus uses only bleached pulp, it has excellent color fastness properties. In fact, Kallima® Coated Cover C1S Plus is superior to many single-ply SBS products since it does not contain optical brighteners, which fade and yellow with time. Kallima® Coated Cover C1S Plus has such good color fastness properties that it is used in the paint chip market – a market in which color fastness is critical. In fact, color fastness is one of the main tests used by paint chip manufacturers to qualify a substrate. Many single-ply SBS products cannot be used in the paint chip market due to their poor color fastness properties.

Summary

Kallima® Coated Cover C1S Plus is a **fully bleached** cover grade made to caliper for consistent stiffness. The middle ply, which uses high-yield pulp, is the key reason that Kallima can be made in a lighter weight without sacrificing quality.

Three ply machines represent the most modern technology for board making today. The Tembec Paperboard Group's machine is the newest paper machine in North America further ensuring the high quality of Kallima® Coated Cover C1S Plus.

Because of its superior color fastness properties, Kallima® Coated Cover C1S Plus is the perfect product for POP displays, book covers, directory covers, postcards, brochures and other end uses constantly exposed to light.

Visit www.kallimapaper.com and learn more about Kallima® Coated Cover C1S Plus.

