

<u>Corrugated board – material specification.</u>

The raw materials in corrugated board for the liner are: unbleached kraftliner, whitetop kraftliner, whitetop testliner, kraft top, cardboard and testliner. The fluting is either recycle based or virgin based fluting.

Depending on the strength properties or functions required for the use, the raw materials are then combined into different types of corrugated board. Below is a description of each of the materials:

Unbleached kraftliner

The liner contains approx. 70-75% virgin fiber, mainly from softwood. The fibers are released through the sulphate method. The recycled fibers are from different classes of recycled fibers according to EN 643:2014 (Paper and board – European list of standard grades of paper and board recycling).

Whitetop kraftliner

100% virgin fibres, from softwood and hardwood (birch). The bleached layer weighs 85 g/m², the rest is unbleached fiber. Bleaching process includes oxygen and hydrogen peroxide. The liner is classified as Totally Chlorine Free (TCF). The fibers in the bleached layer is from hardwood and softwood while the fibers in the unbleached layer is from softwood.

All fibers are released through the sulphate method. The AOX-emission to the recipient is far below the limit <0,25 kg/ton bleached pulp. This is documented by the supplier. The material fulfil the requirements for packaging to dry and non-fatty food.

Coated whitetop kraftliner

The liner is as above, and the surface is coated with pigment (approx. 16 g/m²) for improved printing performance.

<u>Light coated white top kraftliner</u>

The liner is as above, and the surface is coated with pigment (approx. 8 g/m²) for improved printing performance.

Valid two years 1 (4)



Kraft top

Kraft top is an unbleached test liner as a bottom layer and contains approx. 80% recycled fiber and approx. 20% virgin fiber in the top layer, mainly from softwood. The fibers are released through the sulphate method. The recycled fibers are from different classes of recycled fibers according to EN 643:2014 (Paper and board – European list of standard grades of paper and board recycling).

Coated Whitetop testliner

Contains 100% recycled fibers from different origins, according to EN 643:2014 (Paper and board – European list of standard grades of paper and board recycling). The surface is coated with pigment (approx. 16 g/m^2) for improved printing performance.

White testliner

Testliner contains 100% recycled unbleached fibers in the bottom layer and bleached recycled fibers in the top layer. The recycled fibers are from different classes of recycled fibers according to EN 643:2014 (Paper and board – European list of standard grades of paper and board recycling).

<u>Unbleached testliner</u>

Testliner contains 100% recycled fibers. The recycled fibers are from different classes of recycled fibers according to EN 643:2014 (Paper and board – European list of standard grades of paper and board recycling).

Recycled fluting

Contains 100% recycled fibers. The recycled fibers are from different classes of recycled fibers according to EN 643:2014 (Paper and board – European list of standard grades of paper and board recycling).

Coated cardboard

The cardboard is built up of several layers, containing approx. 85 % recycled fibres. The surface is coated with pigment (approx. 24 g/m²) for improved printing performance. The cardboard is used for offset printing.

Virgin based fluting

Contains 100% virgin fibers from hardwood. The fibers are released both chemically and mechanically. The material fulfil the requirements for packaging to dry, non-fatty, wet and fatty food.

Valid two years 2 (4)



Paratherm

Weight adjusted as needed. The paratherm surface protects against grease and moisture. Paratherm in combination with white kraftliner fulfil the requirements for packaging to dry, non-fatty, wet and fatty food.

Paraten

Weight adjusted as needed. The paraten surface procects against grease and moisture.

Paraten Greaseproof

Weight adjusted as needed. The Paraten Greaseproof surface is an effective barrier to fatty food.

Glue

A starch glue is used to make the corrugated board from paper. The amount of glue in finished corrugated board is about 10 g/m².

In laminating and in converting a PVA adhesive is used, the main component is a polymer.

<u>Inks</u>

Inks used for decor are water-based.

The ink contains of 12-15% pigment and the rest extender. The extender contains of water, resin and wax. No mineral oils (<0.1% by dry weight) are included. For offset printing inks, vegetable oil-based ink is used.

Limitations

Corrugated board including recycled fluting, is not suitable for high humidity environment if the packaging has to be self-supporting.

Packaging and environment

The corrugated cardboard fulfil the requirements in EU 94/62 EG (packaging directive regarding maximum level of heavy metals, recovery etc) via the Swedish standards SS-EN 13427:2004 and underlying standards 13428:2004-13432:2004. Part standard SS-EN 13428:2004 is covered together with the user through the complete supply chain.

Further relevant legislation (environmental, working environment, food safety) is well known and is continuously updated to our organization when changing.

Valid two years 3 (4)



Smurfit Kappa is certified to Chain of Custody, according to the Forest Stewardship Council standard.

Smurfit Kappa Group is a member of UN Global Compact, for a sustainable development, and in SEDEX, Suppliers Ethical Data Exchange.

Every year a Sustainability Development Report from Smurfit Kappa Group ispublished at www.smurfitkappa.com.

Documentation

All paper materials are well documented from the suppliers and fulfil the requirements for packaging of dry and non-fatty foods in accordance with BfR § XXXVI.

Traceability

The production code on the box and the information on the transport documents gives a reference to the unique order number for the corrugated board production. The order number also enables traceability to glue batch for corrugated board production, as well as control documents during the manufacturing process.

Smurfit Kappa Sverige AB is certified according to ISO 9001 and ISO 14001, the certificate numbers are Intertek 52755, 1431965.

Certificate numbers for Chain of Custody (FSC) is SCS-COC-005770. Certificate number for Food Safety FSSC 22000 is Intertek 0105818.

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Smurfit Kappa Sverige

Quality Assurance

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