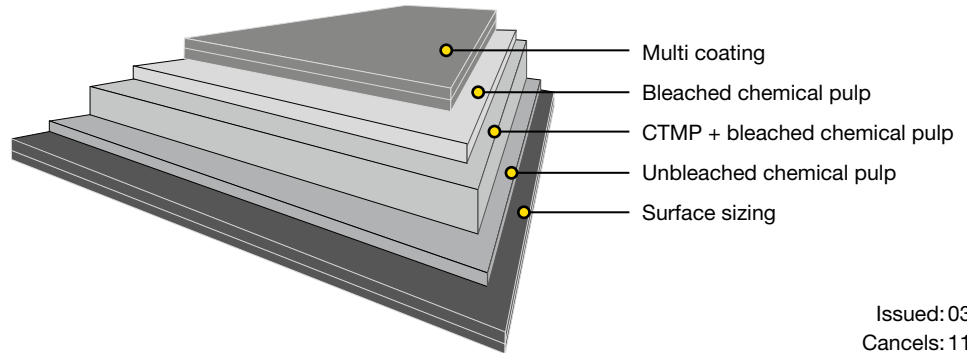


Multilayer kraft back board

Karneoli™ is a fully coated multilayer kraft back board with a bleached chemical pulp layer on the top side and other layers made of CTMP and unbleached chemical pulp. The board has a triple coating on the top side. The top side is white and the reverse side is brown.



Issued: 03.2020
Cancels: 11.2019

Technical Specification

Property / Unit	Tolerance								Standards
Grammage, g/m ²	+/-4%	200	230	250	270	300	325	360	ISO 536
Thickness, µm	+/-4%	300	350	390	430	485	540	590	ISO 534
Bending stiffness Taber 15° MD, mNm	min -15%	7.0	11.6	15.6	19.8	26.8	34.0	42.6	ISO 2493
Bending stiffness Taber 15° CD, mNm	min -15%	3.7	6.1	8.2	10.4	14.1	17.9	22.4	
Bending resistance L&W 15 MD, mN	min -15%	145	240	324	409	556	703	882	ISO 2493
Bending resistance L&W 15 CD, mN	min -15%	77	126	170	215	292	370	464	
Moisture, %	+/-1%	7.0	7.0	7.5	7.5	8.0	8.0	8.5	ISO 287 / GB/T 462
ISO Brightness C/2°, %, Top	min 78%	81	81	81	81	81	81	81	ISO 2470
Surface Smoothness, PPS 10, µm	max 2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	ISO 8791-4
Surface Smoothness, Bendtsen, ml/min, Reverse	max. 2000	1500	1500	1500	1500	1500	1500	1500	ISO 8791-2
Scott Bond, J/m ²	≥ 100	175	175	175	175	175	175	175	TAPPI T 569 om
Gloss 75°, %, Top	≥ 30	40	40	40	40	40	40	40	TAPPI T 480 / ISO 8254
EWT, 23oC Water, kg/m ²	≤1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	Mill Method
Cobb Water 60s, g/m ² , Top	≤60	30	30	30	30	30	30	30	ISO 535 / GB/T 1540
Cobb Water 60s, g/m ² , Reverse	≤60	35	35	35	35	35	35	35	
Fluorescent substance, wavelength 254mm and 365mm	N/A	Negative							GB 31604.47

All properties according to Beihai Mill measurements from board machine production.

Laboratory test climate 23°C/50% RH (According to ISO 187).

Tolerances based upon 95% confidence limits, apply to delivered reel/pallet average.

Bending moment Taber 15° and Bending resistance L&W 15° are binding, Bending stiffness DIN 5° are indicative.

Bending moment Taber 15° calculated from Bending resistance L&W 15°.

Certificates

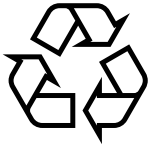
Quality management ISO 9001
 Environmental management ISO 14001
 Product safety FSSC 22000
 Health and safety OHSAS 18001
 Energy management ISO 50001



The mark of responsible forestry



FSC and PEFC certified board available upon request.



Paperboard is recyclable

Key characteristics and main enduses

Karneoli™ is all about strong character, strong brands and strong messages. It is an ideal packaging material for folding cartons for dry, chilled and frozen food, chocolate, wine and spirits. Karneoli™ also makes great multipacks – the eye-catching pack is light and strong and easy to buy, carry, open and recycle. The material's exceptional stiffness and strength, combined with great runnability and printing quality, make Karneoli™ a world-class choice for a wide range of applications. One of the most important reasons to choose Karneoli™, however, is its proven food safety.

Printing and finishing techniques

The product can be used with different printing techniques such as offset, flexo and digital printing. In digital printing, the product is suitable for several different sheet- or web-fed presses. Inkjet, dry or liquid toner technology can be used, although in some cases, pretreatment of the substrate might be required. The latest certification status can be verified on the press manufacturer's website or with local Stora Enso representatives. It is important to check the limitations of the equipment, particularly because of the exceptional difference in the thickness and stiffness of board compared with paper in the same grammages. When running thicker substrates, the press manufacturer's recommendations should be referred to for optimal grain direction. Essentially all of the same finishing processes apply to both digitally printed and offset printed work. Since a wide variety of digital printing equipment is available in the market, it is important that a new commercial print job is always preceded by a trial run, including all required printing and converting process phases. The product works very well with different finishing techniques, such as embossing, hot foil stamping and others. It is suitable for laser coding. Certificate according to PTS-DF 105/2013 is available upon request.

Storage recommendations

For optimal printing results, the moisture proof wrapping should not be removed until the board has reached the temperature of the press room.

Pallet/Reel Weight (kg)	Difference in temperature between board and press room (press room temp. approx. 20°C)		
	10°C	20°C	30°C
400 kg	2 days	2 days	3 days
800 kg	2 days	3 days	4 days
1200 kg	2 days	4 days	5 days

The product properties, according to the specifications, are guaranteed for 12 months after the production date. In order to ensure product safety, the product must be well wrapped and stored indoors, sheltered from rain and snow. The recommended storage conditions are 50-55% relative humidity and 20-23°C.