

MetsäBoard Prime FBB EB

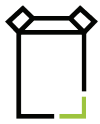
Easily recyclable and compostable barrier paperboard



MetsäBoard Prime FBB EB is a dispersion coated barrier paperboard with a medium barrier against grease and moisture. It is lightweight and can be recycled in paper or paperboard waste streams according to local recycling schemes. MetsäBoard Prime FBB EB is OBA-free board suitable for direct food contact globally.

Key advantages

- Plastic-reducing option for packaging
- Excellent printability enhancing brand experience
- Biodegradable and compostable
- Certified by DIN CERTCO for
 - industrial compostability (DIN EN 13432 and ASTM D6400 standards)
 - home compostability (NFT 51-800)



End-uses: Food service, fresh, dry and frozen food and other packaging end-uses that require barrier properties upon testing

Optimized offering

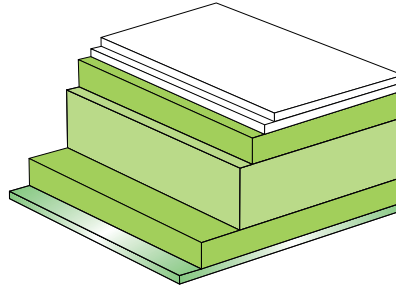
- 12 pt (200 gsm)
- 13 pt (215 gsm)
- 14 pt (225 gsm)
- 15.2 pt (235 gsm)
- 16.3 pt (250 gsm)
- 17.9 pt (270 gsm)
- 19.1 pt (285 gsm)
- 22.2 pt (325 gsm)
- 23.6 pt (350 gsm)



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Features:

Printing method: Offset, Flexo, Digital,
Food contact: EU Regulation (EC)
No 1935/2004,
USFDA21CFR§176.170*,
USFDA21CFR§176.180*,
GB4806.8, GB9685



Structure:

- ① Double blade coating
- ② Bleached chemical pulp
- ③ Bleached chemi-thermo-mechanical pulp (BCTMP)
- ④ Bleached chemical pulp
- ⑤ Dispersion barrier coating

Property, Unit	Method	Standard	Tolerance	Values									
Grammage g/m ²		ISO 536	± 2%	200	215	225	235	250	270	285	325	350	
Caliper		ISO 534		12.0	13.0	14.0	15.2	16.3	17.9	19.1	22.2	23.6	
Thickness µm		ISO 534	± 4%	305	330	355	385	415	455	485	565	600	
Bending stiffness CD	Taber 15°	ISO 2493-2	- 15%	3.4	4.1	4.9	5.9	7.3	9.0	10.4	13.7	16.0	
Bending stiffness MD	Taber 15°	ISO 2493-2	- 15%	8.2	10.2	11.6	14.2	17.3	21.2	24.5	30.3	37.4	
Moisture content %		ISO 287	± 1.0	7.0	7.0	7.0	7.2	7.5	7.7	7.8	8.3	9.0	
Smoothness top µm	PPS10	ISO 8791-4	max 1.5	15	15	15	15	15	15	15	15	15	
Brightness top %	Illumination C/2°	ISO 2470-1	± 1	85	85	85	85	85	85	85	85	85	
Brightness reverse (C/2)	Illumination C/2°	ISO 2470-1		82	82	82	82	82	82	82	82	82	
Off-flavor (Robinson test)	12 mo in orig. pack	EN 1230-2		<1	<1	<1	<1	<1	<1	<1	<1	<1	

Tolerances, when specified, are based on 95% confidence limits on mill measurements of samples tested in paperboard manufacturing conditions (23°C/50% RH).

Metsä Board Paperboard mills have FSC® / C001580 and PEFC™ / 02-31-92 CoC certificates.

*Please contact Metsä Board for details of grammage and / or country-specific, restrictions and limitations.

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up-to-date product information



MetsäBoard Prime FBB EB FAQ's

What does “EB” stand for?

The “EB” portion of the name “MetsäBoard Prime FBB EB” is not specific to any definition or inference, and is simply part of the name of our barrier paperboard.

Is MetsäBoard Prime FBB EB plastic-free?

This product is plastic lining-free (there is no plastic layer that can be separated from the fibers as in extruded or laminated paperboard). It not contain plastic components according to the plastic definition of ISO 472:2013(E/F) Plastics.

Is the dispersion coating proprietary? If we sign an NDA, can we get the composition/recipe of the coating?

Yes, the barrier dispersion coating is proprietary and is not divulged even with an NDA. Keep in mind that the barrier properties of MetsäBoard Prime FBB EB are achieved not only with the proprietary barrier dispersion coating, but with the combination of both fiber formation in addition to the barrier coating. For any questions or concerns regarding the materials used in the manufacturing of MetsäBoard Prime FBB EB, please refer to our Product Safety Statement for this material.

What is the KIT level of MetsäBoard Prime FBB EB?

KIT testing was designed for testing the OGR (oil and grease resistance) of paperboard that is coated with fluorochemicals. MetsäBoard Prime FBB EB contains no fluorochemicals; therefore, the solvents utilized in KIT testing specifically attack and degrade the barrier components giving unreliable results. Metsä Board utilizes ASTM F119-based testing methods which evaluate the performance of MetsäBoard Prime FBB EB's barrier over time using both temperature and humidity as contributing factors in characterizing OGR performance. KIT is not compatible with non-fluorinated materials.

Is MetsäBoard Prime FBB EB oven and/or microwave safe?

The product has been tested in two microwave oven conditions (720W and 1440W) for three minutes. In order to simulate moisture from heated product the microwave oven included 850 ml water in a glass jar. Implications for board quality:

- Depending on the microwave power, the moisture content of the paperboard decreased by 1-3 %
- No changes in visual appearance on either side of the paperboard
- The test did not affect mechanical properties of the paperboard

Suitability for high temperature conditions (oven applications) has been tested according to overall migration test in food simulant, 120 minutes in 347 °F applying the test method EN 1186-13:2002 “ Plastics. Part 13: Test methods for overall migration at high temperatures”. Overall migration from samples is below the 10mg/dm² limit.

Observations of technical properties during the test:

- Decrease in board moisture content, and consequent changes in mechanical properties
- Visible implications for appearance on both sides of the paperboard

Based on the above observations it is recommended to use a heat-resistant layer together with the paperboard in high-temperature applications. As the intended use (e.g. time, temperature, food type, packaging design) determine the behavior of the paperboard it is always the responsibility of the end user to test the suitability of the paperboard to the specific

end use. The interactions of food stuff in direct contact with the barrier layer have studied only with a limited amount of food. highly recommend the customers to carry out testing with the food products. Suitability for food contact is described in our Product safety statement.

Is MetsäBoard Prime FBB EB FDA-approved for direct contact with food without a primary package?

According to the The Federal Food, Drug, and Cosmetic Act and all applicable food additive regulations, including 21 C.F.R. §§ 176.170 (“Components of paper and paperboard in contact with aqueous and fatty foods”) and 176.180 (“Components of paper and paperboard in contact with dry food”), MetsäBoard Prime FBB EB is safe for contact with all food types EXCLUDING Infant formula and breast milk—under FDA’s Conditions of Use A (“High temperature heat-sterilized [e.g., over 212°F]”) through (“Frozen or refrigerated: Ready-prepared foods intended to be reheated in container at time of use”).

Is MetsäBoard Prime FBB EB able to be used for cups?

While MetsäBoard Prime FBB EB does not contain any type of heat-sealable plastics, this material may be used for cup applications using sealable coatings, adhesives and other cup manufacturing methods. Testing is required in all applications determine material, formability, and end-use compliance.

MetsäBoard Prime FBB EB is known to be used for bakery applications, but what about berries or other fruit and/or agricultural applications? Others?

MetsäBoard Prime FBB EB is suitable for any application requiring paperboard packaging with good grease and moisture resistance. With that being said, the number of variables presented by different products are endless! It is best to coordinate testing of MetsäBoard Prime FBB EB with your products to determine if the barrier properties of our board meet your specific application requirements. MetsäBoard Prime FBB EB has been successfully tested and/or used for a variety of other applications, such as berries and other fresh produce, frozen meats, and other refrigerated and frozen prepared foods.

Sustainability-related FAQ's

Is MetsäBoard Prime FBB EB compostable (both home and industrial)?

MetsäBoard Prime FBB EB is certified as industrially compostable in accordance with the DIN EN 13432 and/or ASTM D6400 standards (certifiers: DIN CERTCO and BPI) and home compostable in accordance with the NF T 51-800 standard (certifier: DIN CERTCO).

Can we get FSC Mix Credit COC (Chain Of Custody) for MetsäBoard Prime FBB EB?

Yes, all Metsä Board mills are FSC CoC certified, so all of our products can be purchased with the FSC Mix Credit certification claim. However, we have a limited incoming supply of FSC certified material as many of the forests we harvest from fall only under the PEFC CoC, and we cannot sell more FSC certified material than we harvest. Therefore, it is important to confirm with your sales contact that we have sufficient volumes of FSC certified material available. Providing your sales contact with your expected volume of FSC certified paperboard as soon as possible guarantees those volumes for the year.

What is “DIN CERTCO” (TÜV Rheinland Group) and is it equivalent to BPI (Bio-degradable Products Institute) certifications? Are DIN CERTCO certifications valid in the US market?

DIN CERTCO is a certification body based in Germany that provides conformity assessment services and certifications for various products, systems, and services. It is a subsidiary of TÜV Rheinland, a globally-recognized testing, inspection, and certification company. DIN CERTCO compostibility certifications are recognized in the US, although they may not be as commonly encountered as certifications from organizations like BPI. The US does not have a single national standard for compostibility. Instead, various certification bodies, including BPI, ASTM International, and others, provide their own standards and certifications. Some businesses or organizations in the US may specifically seek out DIN CERTCO certifications for their products due to their alignment with European regulations or for international trade purposes, but with respect to compostibility, BPI is the leading certification body in North America. The differences between DIN CERTCO and BPI stem from a geographical scope. DIN CERTCO certifies products based on European standards EN 13432 or EN 14995, and BPI certifies products based on ASTM D6400 or ASTM D6868 standards, which are primarily recognized in North America. The testing procedures and composting conditions differ slightly between ASTM and EN standards, but ultimately they are both used to evaluate the compostibility of products and materials.

Can I get a BPI certification for all calipers available for MetsäBoard Prime FBB EB?

Yes, the BPI certification for MetsäBoard Prime FBB EB applies to all calipers. When we commissioned compostibility testing at a third-party lab recognized by BPI, we provided a sample of our highest caliper of MetsäBoard Prime FBB EB. As a result, all lower calipers are considered to be under the same BPI certificate.

Any sustainability info on MetsäBoard Prime FBB EB versus PE or PLA coatings?

MetsäBoard Prime FBB EB vs. PE (PolyEthylene)

PE requires more energy and creates more emissions to produce than MetsäBoard Prime FBB EB. PE-coated paperboard has a much lower recycling rate than MetsäBoard Prime FBB EB because many material recycling facilities in the US are unable to process it. As a result, PE-coated paperboard often winds up in landfills or is incinerated—creating more emissions at the end-of-life stage of the packaging. Additionally, even if a material recycling facility can separate the PE from the paperboard, the PE is still mostly landfilled or incinerated, and is rarely recycled. PE is not compostable or biodegradable unlike MetsäBoard Prime FBB EB which is.

To learn more about the environmental impact of our dispersion barrier versus plastic, explore our third-party verified study comparing the footprint of MetsäBoard Prime FBB EB to fossil-based PP in a food tray application. Download the [full assessment](#) on our website or contact your sales rep.

MetsäBoard Prime FBB EB vs. PLA (PolyLacticAcid)

PLA is not always compostable, and when it is, it requires an industrial environment whereas MetsäBoard Prime FBB EB is home compostable. Sometimes, PLA is not even biodegradable. Due to its mixed material composition, PLA-coated paperboard is more challenging to recycle, and is likely not recyclable at most material recycling facilities.

Converting-related FAQ's

Is the reverse/back-side (barrier side) of MetsäBoard Prime FBB EB printable?

Yes, the backside is printable with typical printing inks used in packaging manufacturing. As with all substrates, we recommend customer print testing prior to production to ensure ink system compatibility as well as to verify that the specific quality requirements of the printed package are achievable.

What kind of glue should be used for the gluing process (especially for extreme freezer/cooking applications)?

MetsäBoard Prime FBB EB is successfully utilized in diverse packaging applications—including refrigerated, freezer, and microwave applications—all around the world. As with all substrates, it is important for the customer to work together with their glue manufacturer to determine the best adhesive for the packages' application and to perform acceptance testing prior to manufacturing.

Can we print and/or add an additional coating over the backside EB coating?

Yes, coatings for improving moisture and OGR can be applied to enhance the barrier characteristics of MetsäBoard Prime FBB EB, as well as other coatings that enhance the functionality of the such as heat-sealing, etc. As with all substrates, acceptance testing should be conducted by the customer to ensure compatibility and performance prior to manufacturing.

Are there any special requirements or issues to consider when sheeting MetsäBoard Prime FBB EB?

As with all substrates, proper blade and slitter angles are required for the proper sheeting of MetsäBoard Prime FBB EB. Our barrier board performs similarly to all other Metsä Board products. If assistance is required to overcome any sheeting anomalies, our Technical service team can support you with recommendations garnered from successful sheeting practices implemented around the world by companies who successfully sheet our products every day.

Can MetsäBoard Prime FBB EB be digitally printed?

With the proliferation of digital printing methods utilized in packaging manufacturing today, testing is required to ensure product compatibility—with special attention being paid to the barrier side of the sheet. MetsäBoard Prime FBB EB performs similarly to other Metsä Board materials that have been verified to work with specific digital print applications.

Are there specific die cutting recommendations specific to MetsäBoard Prime FBB EB?

While there are no special or “out of the ordinary” cutting and creasing recommendations for MetsäBoard Prime FBB EB, Metsä Board's Technical service team can provide you with the best specifications for cutting and creasing MetsäBoard FBB which can provide optimal results with all of our paperboard products. Most printers have great results without any modifications to their existing dies, and can switch between material types without issue due to the specifications incorporated into the existing die. Due to the barrier properties of MetsäBoard Prime FBB EB, it is important to ensure that creasing does not crack or damage the barrier side of the sheet or its performance will be compromised. If defects occur, it is advised to contact our Technical service team for our recommended cutting and creasing specifications.