

# Environmental Product Declaration

In accordance with ISO 14025



## MetsäBoard Prime FBB EB

Folding boxboard with dispersion barrier coating



Programme: The International EPD® System, [www.environdec.com](http://www.environdec.com)

Programme operator: EPD International AB

EPD registration number:

S-P-09340

Publication date: 2023-05-30

Valid until:

2028-05-30

An EPD should provide current information and may be updated if conditions change. The stated validity is therefore subject to the continued registration and publication at [www.environdec.com](http://www.environdec.com).



## Programme information

<b>Programme:</b>	The International EPD® System
<b>Address:</b>	EPD International AB, Box 210 60, SE-100 31 Stockholm, Sweden
<b>Website:</b>	www.environdec.com
<b>E-mail:</b>	info@environdec.com

Product category rules (PCR): PCR 2010:14 Processed paper and paperboard (3.1)

PCR review was conducted by: The Technical Committee of the International EPD® System. The review panel may be contacted via info@environdec.com.

Independent third-party verification of the declaration and data, according to ISO 14025:2006:

EPD process certification
  EPD verification

Third party verifier: Martin Erlandsson, IVL

In case of recognised individual verifiers:

Approved by: The International EPD® System

Procedure for follow-up of data during EPD validity involves third party verifier:

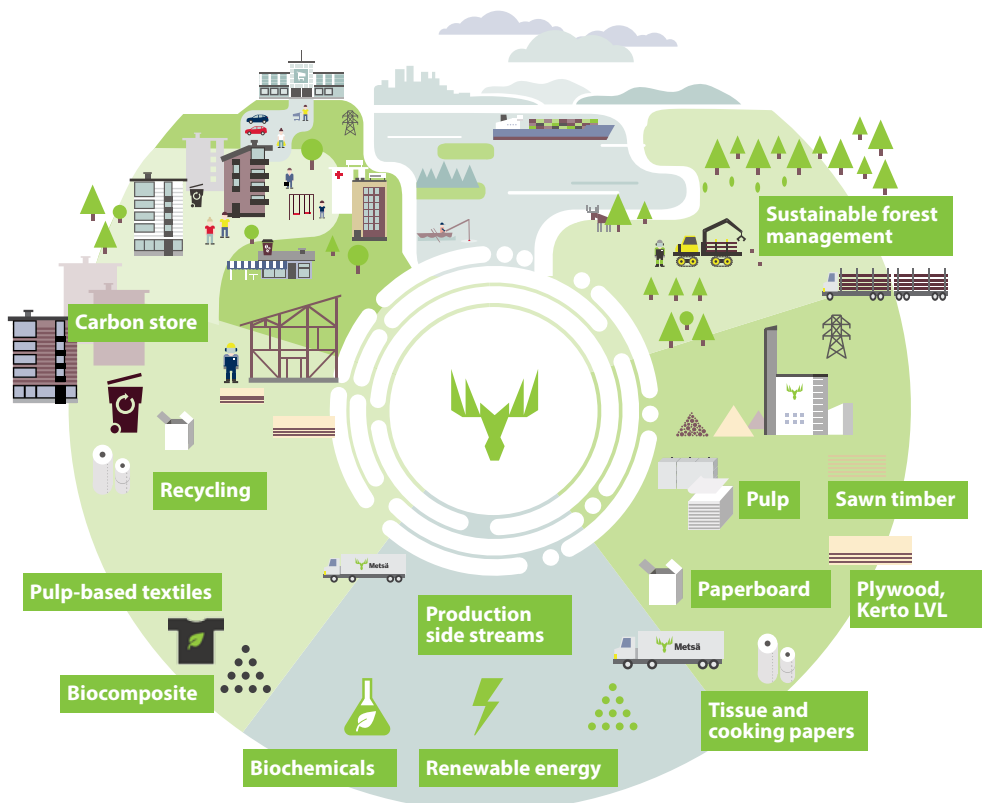
Yes
  No

The EPD owner has the sole ownership, liability, and responsibility for the EPD.

EPDs within the same product category but from different programmes may not be comparable.

## Company information

<b>Owner of the epd:</b>	Metsä Board Corporation P.O. Box 20 02020 Metsä Finland www.metsaboard.com
<b>Description of the organisation:</b>	<p>Metsä Board is a leading European producer of premium fresh fibre paperboards. We focus on lightweight and high-quality folding boxboards, food service boards and white kraftliners. The pure fresh fibres we use in our products are a renewable resource, traceable to origin in sustainably managed northern forests. We are a forerunner in sustainability, and we aim for completely fossil free mills and raw materials by 2030.</p> <p>Metsä Group leads the way in the bioeconomy. Metsä Group invests in growth, developing bioproducts and a fossil free future. The raw material for our products is renewable wood from sustainably managed northern forests. Metsä Group focuses on the growth sectors of the forest industry: wood supply and forest services, wood products, pulp, fresh fibre paperboards, and tissue and greaseproof papers.</p> <p>Metsä Group consists of Metsäliitto Cooperative, its two businesses Metsä Wood and Metsä Forest, and its subsidiaries Metsä Tissue, Metsä Board and Metsä Fibre. Metsäliitto Cooperative is the parent company of Metsä Group. It is owned by over 90,000 forest owners.</p> <p>Metsä Group stands out from the competition because of its ownership base and business structure, which also give its operations a long-term perspective. Through Metsäliitto Cooperative's owner-members, Metsä Group has access to a considerable reserve of premium-quality raw material, which provides a stable, long-term foundation for the development of its operations and production plants.</p>
<b>Product-related or management system-related certifications:</b>	<p>Metsä Forest, part of Metsä Group, is the only wood supplier for Metsä Board mills in Finland. Metsä Forest, Metsä Fibre as well as Metsä Board's pulp and board mills, have PEFC (02-31-92) and FSC® (C001580) Chain of Custody certificates. Metsä Board's mills have certified management system including ISO 9001 quality management, ISO 14001 environmental management, ISO 45001 health and safety management, ISO 50001 energy management, ISO 22000 food safety management as well as FSSC 22000 food safety management.</p> <p>Metsä Forest fulfils the obligations of European Union Regulation No. 995/2010 (EU Timber Regulation), UK Timber Regulation, US Lacey Act and Australian Illegal Logging Prohibition Act, which all prohibit placing on market and trading of illegally harvested timber and timber products. As all the wood raw material is covered by Chain of Custody certification, Metsä Board knows the origin of all the wood it uses. The PEFC logo on the product ensures that 100% of the wood raw material is legally harvested, and at least 70% is sourced from certified forests. In 2022, the share of certified wood Metsä Board used was 83%.</p>
<b>Name and location of production site:</b>	Metsä Board Kyro Board Mill Hammareninkatu 10 39200 Kyröskoski Finland



## Product information

<b>Product name:</b>	MetsäBoard Prime FBB EB
<b>UN CPC:</b>	Paper and paperboard coated with kaolin or with other inorganic substances (Group: 321, Class: 3214, Subclass: 32142) other inorganic substances
<b>Product description:</b>	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 the brightest OBA-free board on the market, with excellent printability.  It is made without fluorochemicals and optical brighteners (OBA) making it suitable for direct food contact globally.
<b>Other information:</b>	According to REACH Regulation chemical suppliers are required to inform downstream users regarding the presence of substances listed on the Candidate List of Substances of Very High Concern (SVHC) for Authorisation above the reporting limit. Based on this information this product does not contain Substances of Very High Concern above the reporting limit of 0.1%.

## Content declaration

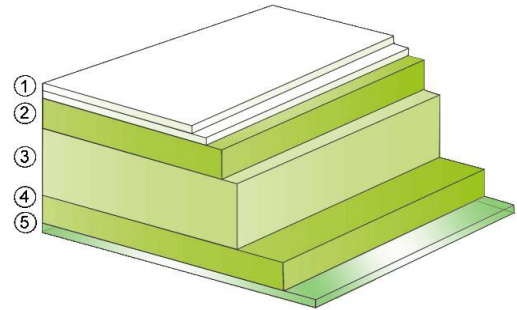
	%	kg*
<b>Bleached Chemical Pulp **</b>	25	250
<b>Bleached Chemi-Thermo Mechanical Pulp ***</b>	50	500
<b>Pigments and Fillers</b>	12	120
<b>Binders</b>	5	50
<b>Moisture</b>	8	80

\* The weight has been calculated for 1 t of MetsäBoard Prime FBB EB with average composition of products produced during the year of data collection

\*\* Bleached chemical pulp is from Metsä Fibre and it consists of softwood pulp made of spruce (*Picea abies*) and pine (*Pinus sylvestris*) as well as hardwood pulp made of birch (*Betula pubescens*) and aspen (*Populus tremula*).

## Distribution packaging

	kg*
<b>Core</b>	7.7
<b>Cover (kraftpaper)</b>	4.5



\* average amount of packing material used to pack 1 t of MetsäBoard Prime FBB EB during the year of data collection

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

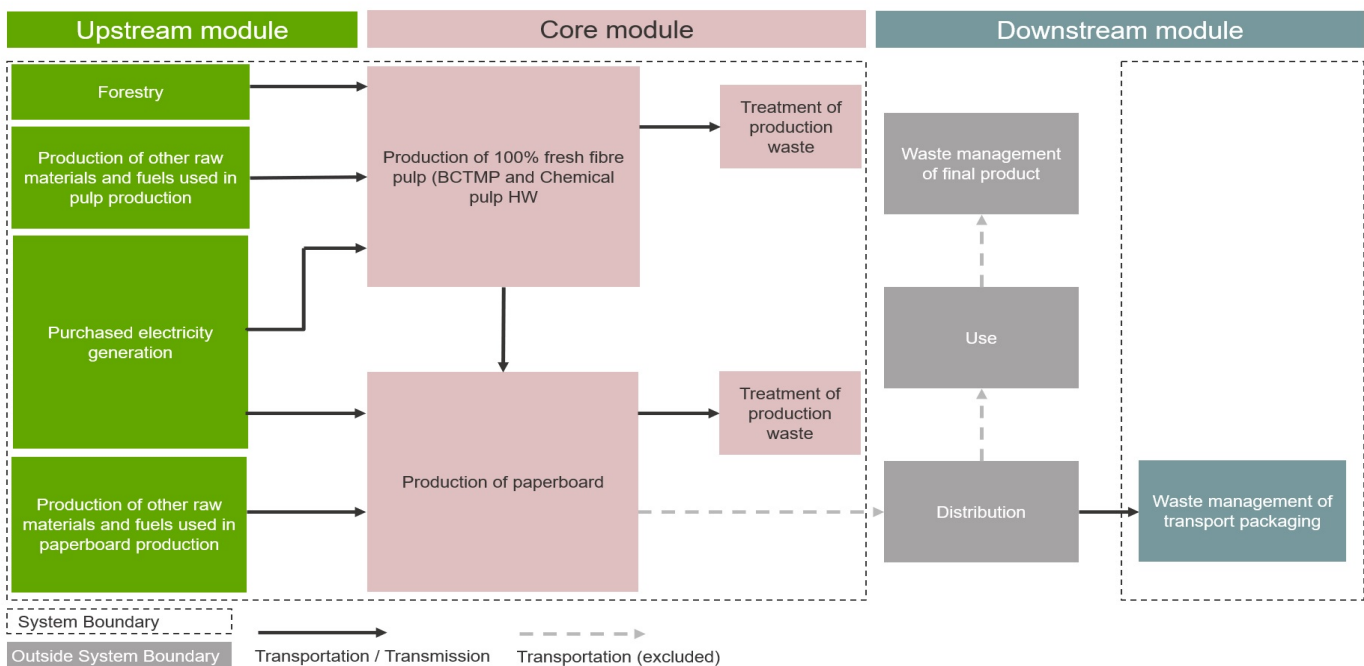


## LCA information

<b>Declared unit:</b>	1 tonne of MetsäBoard Prime FBB EB 195–320 g/m <sup>2</sup> (12–22.2 PT) with a moisture content of 8%. The values reported represent an average between the minimum grammage and maximum grammage of this specific paperboard.
<b>Geographical scope:</b>	All primary and secondary data were collected specific to the countries or regions under study. Where country-specific or region-specific data were unavailable, proxy data were used. Geographical representativeness is considered to be very good.
<b>Time representativeness:</b>	The data for this EPD was collected from year 2022 from Kyro Board mill as well as Äänekoski Fibre chemical pulp mill, Rauma Fibre chemical pulp mill, Joutseno and Kaskinen BCTMP mills. All mills located in Finland. The data includes raw materials, energy consumption, water consumption, packaging, paperboard, by-products, wastes and all related transportations. Generic data has been modelled using GaBi and Ecoinvent Databases. Allocation rules applied (physical, economic and energy) follow PCR requirements.
<b>Database and LCA software used:</b>	The LCA model is created using the GaBi Software and the GaBi LCI database 2023.1 as well as Ecoinvent 3.8 database.
<b>Other information:</b>	All relevant raw materials and energy carriers used in manufacturing have been covered in the LCA calculations. Some minor process auxiliary chemicals used representing less than 1% in mass and environmental results shares haven't been considered (cut-off approach).
<b>Description of system boundaries:</b>	Cradle to gate with waste management of transport packaging waste (based on scenarios).

## System boundaries

<b>Upstream:</b>	Production of plants, energy wares, materials and substances, forestry, production of energy wares and chemicals and other raw materials used in the core processes.
<b>Core:</b>	Transportation of all materials (including wood) to the core processes, production of pulp, production of paperboard, and treatment of waste management of production waste.
<b>Downstream:</b>	Waste management of transport packaging (based on scenarios).



## Environmental Information

The results from the tables should be interpreted over the different modules and as they are calculated by the GaBi™ software.

### ENVIRONMENTAL IMPACT INDICATORS - 1 t OF METSÄBOARD PRIME FBB EB

Indicator	Unit	Upstream	Core	Downstream	Total
Global Warming Potential (GWP) - Total	kg CO <sub>2</sub> eq.	3.33E+02	2.21E+02	6.25E+00	5.61E+02
Global Warming Potential (GWP) - Biogenic	kg CO <sub>2</sub> eq.	2.35E+00	3.56E+00	2.27E+00	8.18E+00
Global Warming Potential (GWP) - Fossil	kg CO <sub>2</sub> eq.	3.23E+02	2.17E+02	3.98E+00	5.45E+02
Global Warming Potential (GWP) - Land use and land use change	kg CO <sub>2</sub> eq.	7.96E+00	3.98E-01	1.63E-04	8.36E+00
Acidification potential (AP)	kg SO <sub>2</sub> eq.	1.22E+00	1.84E+00	2.04E-03	3.06E+00
Europhication potential (EP), freshwater	kg PO <sub>43-</sub> eq.	4.47E-02	2.79E-02	2.85E-03	7.54E-02
Europhication potential (EP), marine	kg N eq.	5.11E-01	6.09E-01	8.50E-04	1.12E+00
Europhication potential (EP), terrestrial	Mole of N eq.	4.16E+00	5.52E+00	7.08E-03	9.69E+00
Photochemical Ozone Creation Potential (POCP)	kg NMVOC eq.	1.24E+00	1.46E+00	3.71E-03	2.71E+00
Ozone layer depletion (ODP)	kg CFC-11 eq.	3.12E-05	2.71E-06	6.66E-13	3.39E-05
Abiotic depletion potential - Elements	kg Sb eq.	1.41E-03	2.22E-04	4.41E-05	1.68E-03
Abiotic depletion potential - Fossil resources	MJ	6.11E+03	1.85E+03	4.98E+01	8.00E+03
Water Use	m <sup>3</sup> world eq.	2.61E+01	3.51E+01	3.84E-01	2.96E+02

### INDICATORS DESCRIBING RESOURCE USE - 1 t OF METSÄBOARD PRIME FBB EB

Indicator	Unit	Upstream	Core	Downstream	Total
Use of renewable primary energy as energy carrier (PERE)	MJ	4.03E+04	1.46E+02	4.68E-01	4.04E+04
Use of renewable primary energy resources used as raw materials (PERM)	MJ	0	0	0	0
Total use of renewable primary energy (PERT)	MJ	4.03E+04	1.46E+02	4.68E-01	4.04E+04
Use of non renewable primary energy as energy carrier (PENRE)	MJ	1.35E+04	2.02E+03	5.00E+01	1.56E+04
Use of non renewable primary energy resources used as raw materials (PENRM)	MJ	9.43E+00	1.10E-02	0.00E+00	9.44E+00
Total use of non renewable primary energy resource (PENRT)	MJ	1.35E+04	2.02E+03	5.00E+01	1.56E+04
Use of secondary material (SM)	kg	0	0	0	0
Use of renewable secondary fuels (RSF)	MJ	0	0	0	0
Use of non renewable secondary fuels (NRSF)	MJ	0	0	0	0
Net use of fresh water (FW)	m <sup>3</sup>	8.27E+00	8.80E-01	9.13E-03	9.16E+00

### ENVIRONMENTAL INFORMATION DESCRIBING WASTE CATEGORIES AND OUTPUT FLOWS - 1 t OF METSÄBOARD PRIME FBB EB

Indicator	Unit	Upstream	Core	Downstream	Total
Hazardous waste disposed (HWD)	kg	1.66E-05	3.02E-01	2.54E-10	3.02E-01
Non hazardous waste disposed (NHWD)	kg	7.42E+00	2.08E+00	2.00E+00	1.15E+01
Radioactive waste disposed (RWD)	kg	2.60E+00	1.96E-02	8.16E-05	2.62E+00
Components for re-use (CRU)	kg	0	0	0	0
Materials for recycling (MFR)	kg	0	0	0	0
Materials for energy recovery (MER)	kg	0	0	0	0
Exported electrical energy (EEE)	MJ	0	0	0	0
Exported thermal energy (EET)	MJ	0	0	0	0

## Additional information

Metsä Board's home country, Finland, is the most forested country in Europe. Forests cover approximately 75% of Finland's area and over the past 40 years the growing stock of the forests has increased by more than 40%. The share of strictly protected forests account for 10% of Finland's total forest area, and a majority of the strictly protected European forests are located in Finland.

### Sustainable forestry:

We procure most of our wood raw material from Finland and Sweden (92% in 2022) both of which have a long tradition in forest management, the development of forest and environmental related legislation and forest protection certification systems. The biodiversity of forests and endangered species are both protected by legislation and encouraged through forest certification schemes.

The four species we use for our paperboard production include pine, spruce, birch and aspen. In total, our supply of wood amounts to around eight million cubic meters a year.

### Recyclability and recovery:

MetsäBoard Prime FBB EB has been manufactured using fresh fibres and chemical which are compatible with known, relevant and industrially available paper recycling technologies in the EU. It's also suitable for energy recovery, as it is composed of much more than 50 % of organic content. MetsäBoard Prime FBB EB meet both standards EN 13430 and EN 13431 requirements.

### Waste handling:

EU Directive 94/62/EC on packaging and packaging waste aims at reducing and preventing impacts of the products on the environment. Different standards have been published to ensure the conformity of packaging and packaging waste with applicable management systems, prevention and minimisation of waste, limitations for specific heavy metals and hazardous substances, reuse and recycling possibilities, compostability and energy recovery. The compliance status of Metsä Board products may differ between product grades. More product specific information is provided by Metsä Board upon request.

### Biodegradability:

Biodegradability of a material in the presence of oxygen means the ability of the material to chemically breakdown to carbon dioxide, water, mineral salts and new biomass. For a material to be compostable, it has to be biodegradable and also physically decompose into small pieces (< 2 mm) in a defined timeframe. In addition, the biodegraded and decomposed test material should not have any adverse effects on the quality of the resulting compost or on plant growth. Compostability can be tested for example under industrial and home compost conditions. The main differences between these conditions are the higher testing temperature and shorter duration in industrial compost. Typically, packaging material compostability refers to industrial conditions. MetsäBoard Prime FBB EB is industrially compostable according to EN 13432, ISO 18606 and ASTM D 6400.

## Metsä Board's 2030 sustainability targets

### Safeguarding biodiversity

Share of certified wood fibre >90%  
**MG:** Retention trees at regeneration sites 100%  
**MG:** Four high biodiversity stumps in harvesting sites 90%

### Mitigating climate change and reducing emissions

Fossil-based carbon dioxide emissions, tonnes (Scope 1 and Scope 2, market based) 0 t  
 Share of fossil free energy of total energy consumption 100%  
 Share of target group suppliers have set SBTi targets by 2024\* (Scope 3) 70%  
 Fossil free raw materials and packaging materials, share of dry tonnes 100%  
**MG:** Area of regeneration and management of young stands from the 2018 level 100%  
**MG:** The amount of carbon stored in wood products from the 2018 level + 30%

### Sustainable production and efficient use of resources

Improvement in energy efficiency from the 2018 level >+ 10%  
 Reduction in the use of process water per produced tonne from the 2018 level - 35%  
 Utilisation of side streams 100%

E - ENVIRONMENT

### Responsible corporate culture and accident free working environment

Ethics index in ethics barometer 100%  
 Total Recordable Injury Frequency (TRIF) per million hours worked 0

S - SOCIAL RESPONSIBILITY

### Sustainable supply chain

Suppliers' commitment to the Supplier Code of Conduct, share of total purchases 100%  
 Supplier background check passed, share of total purchases 100%  
 Supplier sustainability assessment passed, share of total purchases 100%  
 Traceability of raw materials, share of total purchases 100%

G - SUSTAINABILITY GOVERNANCE

## References

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EN ISO 14025	EN ISO 14025:2011 Environmental labels and declarations - Type III environmental declarations - Principles and procedures (ISO 14025:2006)
EN ISO 14040+A1	EN ISO 14040:2006 + A1:2020 Environmental management - Life cycle assessment - Principles and framework (ISO 14040:2006 + Amd 1:2020)
EPD® SYSTEM	The International EPD System. Product Category Rules (PCR): PCR 2010:14 Processed paper and paperboard (3.1). The International EPD System.

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