

Environmental Product Declaration



THE INTERNATIONAL EPD® SYSTEM



In accordance with ISO 14025:2006 and EN 15804:2012+A2:2019/AC:2021 for:

MF PB particleboard

from

KRONOSPAN Riga SIA



Programme:	The International EPD® System, www.environdec.com
Programme operator:	EPD International AB
EPD registration number:	EPD-IES-0013466
Publication date:	2024-05-24
Valid until:	2029-05-23

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



General information

Programme information

Programme:	The International EPD® System
Address:	EPD International AB Box 210 60 SE-100 31 Stockholm Sweden
Website:	www.environdec.com
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Accountabilities for PCR, LCA and independent, third-party verification
Product Category Rules (PCR)
CEN standard EN 15804 serves as the Core Product Category Rules (PCR)
Product Category Rules (PCR): <i>PCR 2019:14 Construction products (EN 15804:A2) (1.3.3) and UN CPC 3143 Particle board and similar board of wood or other ligneous materials</i>
PCR review was conducted by: <i>IVL Swedish Environmental Research Institute Secretariat of the International EPD® System</i>
Life Cycle Assessment (LCA)
LCA accountability: <i>Dr. Ing. Kaspars Zudrags, SIA BM Certification</i>
Third-party verification
Independent third-party verification of the declaration and data, according to ISO 14025:2006, via: <input checked="" type="checkbox"/> EPD verification by individual verifier Third-party verifier: <i>Silvia Vilčeková, SILCERT Ltd</i> Approved by: The International EPD® System
Procedure for follow-up of data during EPD validity involves third party verifier: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

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

EPDs within the same product category but registered in different EPD programmes, or not compliant with EN 15804, may not be comparable. For two EPDs to be comparable, they must be based on the same PCR (including the same version number) or be based on fully-aligned PCRs or versions of PCRs; cover products with identical functions, technical performances and use (e.g. identical declared/functional units); have equivalent system boundaries and descriptions of data; apply equivalent data quality requirements, methods of data collection, and allocation methods; apply identical cut-off rules and impact assessment methods (including the same version of characterisation factors); have equivalent content declarations; and be valid at the time of comparison. For further information about comparability, see EN 15804 and ISO 14025.

Company information

Owner of the EPD: "KRONOSPAN Riga" SIA

Contact: office@kronospan-riga.lv

Description of the organisation: KRONOSPAN is the world's leading manufacturer of wood-based panels using advanced technology, and as such KRONOSPAN have pioneered many of industry's key advances and will continue to lead product development and innovation into the future. KRONOSPAN have more than 120 years of experience in the industry and more than 40 manufacturing sites around the world.



For additional information about KRONOSPAN please visit the company web site at <https://lv.kronospan-express.com/en>.

Product-related or management system-related certifications: KRONOSPAN manufacturing processes comply with international standards - ISO 9001:2015, ISO 14001:2015, ISO 50001:2018. Company have implemented and maintains the Chain of Custody management system in accordance with the requirements of the standards FSC (NC-COC-013349) and PEFC (BMCERT-PEFC-COC-00160).

Name and location of production site(s): Daugavgrivas soseja 7B, Riga, Latvia.

Product information

Product name: MF PB particleboard P2 and P3

Product description:

MF PB is a standard board and an essential material in the furniture and interior design industries. Made from particleboard covered with a decorative paper impregnated with melamine resin, it's the most widely used material for modern furniture and is available in various finishes, including gloss, matt, lightly textured and wood grain.

For special applications we offer additional MF PB boards with improved moisture resistance and fire retardant properties.

MF PB comes in four collections – Colour, Standard, Contempo and Harmony. They feature a wide range of designs and a variety of thicknesses and surface textures.



UN CPC code: 3143 Particle board and similar board of wood or other ligneous materials.

Geographical scope: Kronospan Riga sales activities are around two main markets: Baltics which stands for 60% and Scandinavia which is 40%.

LCA information

Declared unit: 1m³ of particleboard with density 671 kg/m³ (conversion factor to mass - 671).

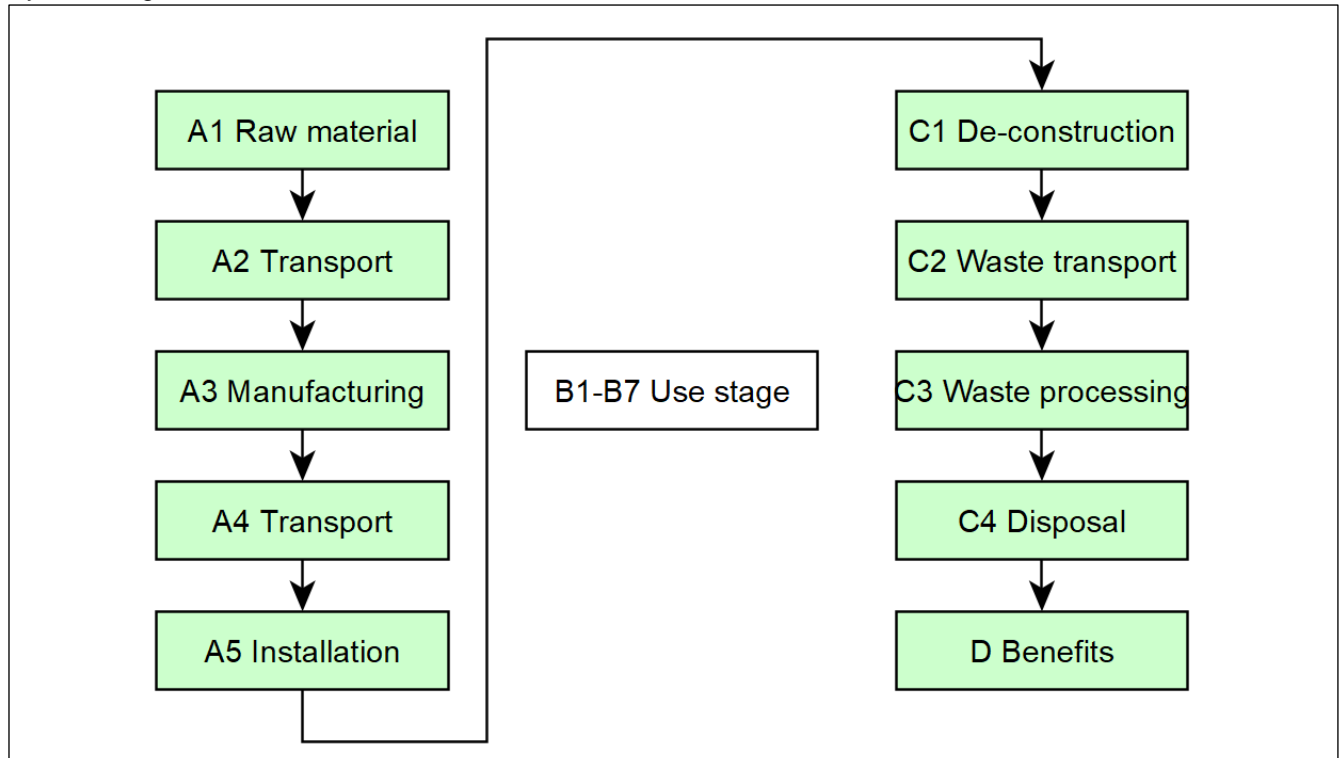
Reference service life: >10 years.

Time representativeness: 01.01.2023.-31.12.2023.

Database(s) and LCA software used: One Click LCA, Ecoinvent 3.8.

Description of system boundaries: Cradle to gate with options, modules C1–C4, module D and with optional modules (A1–A3 + C + D and A4, A5).

System diagram:



More information: All relevant inputs and outputs from each unit process that have available data are considered in the calculation. No single unit process is disregarded if it accounts for more than 1% of the total mass or energy flows. Additionally, the total neglected input and output flows for each module do not surpass 5% of the energy usage or mass.

EN 15804 reference package EF 3.0.

Target group: business to business.

Cut-off criteria: the <1% due difficulties to attributing and minor environmental impacts.

Electricity climate impact 0.56 kg CO₂ eq./kWh.

A4: Transport scenarios include EURO 6 truck transport for 100km.

C1: No loads in C1 have been generated as manual dismantling.

C2: Transport to waste treatment site after dismantling using EURO 6 truck average (50 km assumed).

C3: Assumed as 90% of particleboards is incinerating with energy recovery.

D: Modelled as 90% of particleboards is incinerating with energy recovery.

Modules declared, geographical scope, share of specific data (in GWP-GHG results) and data variation (in GWP-GHG results):

	Product stage			Construction process stage		Use stage							End of life stage				Resource recovery stage
	Raw material supply	Transport	Manufacturing	Transport	Construction installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	
Module	A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Modules declared	X	X	X	X	X	MN D	MN D	MN D	MN D	MN D	MN D	MN D	X	X	X	X	X
Geography	EU												EU				EU
Specific data used	>90%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – products	<10%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – sites	N/A			-	-	-	-	-	-	-	-	-	-	-	-	-	-

Content information

Product components	Weight, kg	Post-consumer material, weight-%	Biogenic material, weight-% and kg C/kg
Recycled wood	360-400	100	0.46
Wood	180-210	0	0.46
Resins	85-95	0	
Melamine impregnated paper	10	0	
Additives	4	0	
TOTAL	671		
Packaging materials	Weight, kg	Weight-% (versus the product)	Weight biogenic carbon, kg C/kg
Plastic	0.05	0.01	
Corrugated board	0.19	0.03	
Particleboard	8.1	1.21	0.40
TOTAL	8.34	1.24	

The product does not contain substances that can be included in the "Candidate List of Substances of Very High Concern for Authorisation".

Results of the environmental performance indicators

Mandatory impact category indicators according to EN 15804:2012 +A2:2019

Results per functional or declared unit									
Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
GWP-total	kg CO ₂ eq.	-6.76E+02	5.84E+00	1.21E+01	0.00E+00	6.30E+00	1.06E+03	9.03E+01	-5.69E+02
GWP-fossil	kg CO ₂ eq.	4.97E+02	5.84E+00	1.31E-01	0.00E+00	6.30E+00	5.52E+00	8.57E-01	-5.67E+02
GWP-biogenic	kg CO ₂ eq.	-1.17E+03	2.42E-03	1.20E+01	0.00E+00	2.44E-03	1.05E+03	8.94E+01	-8.28E-01
GWP-luluc	kg CO ₂ eq.	5.42E-01	2.19E-03	4.41E-05	0.00E+00	2.32E-03	1.25E-02	8.61E-04	-2.67E-01
ODP	kg CFC 11 eq.	7.64E-05	1.46E-06	8.87E-09	0.00E+00	1.45E-06	2.79E-07	2.49E-07	-3.01E-05
AP	mol H ⁺ eq.	2.90E+00	1.86E-02	1.36E-03	0.00E+00	2.67E-02	2.96E-02	7.41E-03	-4.39E+00
EP-freshwater	kg P eq.	1.09E-02	4.17E-05	1.85E-06	0.00E+00	5.16E-05	5.67E-04	2.27E-03	-3.62E-02
EP-marine	kg N eq.	7.00E-01	4.10E-03	6.41E-04	0.00E+00	7.92E-03	4.17E-03	4.34E-03	-5.05E-01
EP-terrestrial	mol N eq.	7.73E+00	4.55E-02	6.81E-03	0.00E+00	8.74E-02	4.71E-02	2.62E-02	-5.88E+00
POCP	kg NMVOC eq.	2.05E+00	1.79E-02	1.68E-03	0.00E+00	2.80E-02	1.32E-02	9.18E-03	-1.64E+00
ADP-minerals&metals*	kg Sb eq.	4.75E-03	1.43E-05	4.12E-07	0.00E+00	1.48E-05	1.52E-05	3.03E-06	-4.14E-04
ADP-fossil*	MJ	9.32E+03	9.33E+01	1.11E+00	0.00E+00	9.46E+01	1.15E+02	1.91E+01	-6.74E+03
WDP*	m ³	5.69E+02	4.30E-01	5.49E-01	0.00E+00	4.23E-01	3.09E+00	2.04E-01	-8.36E+01

Acronyms
 GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption

* Disclaimer: The results of this environmental impact indicator shall be used with care as the uncertainties of these results are high or as there is limited experience with the indicator.

Additional mandatory and voluntary impact category indicators

Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
GWP-GHG ¹	kg CO ₂ eq.	4.82E+02	5.84E+00	1.31E-01	0.00E+00	6.30E+00	5.52E+00	8.57E-01	-5.67E+02

¹ This indicator accounts for all greenhouse gases except biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. As such, the indicator is identical to GWP-total except that the CF for biogenic CO₂ is set to zero.

Resource use indicators

Results per functional or declared unit									
Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
PERE	MJ	1.30E+03	1.21E+00	3.03E-02	0.00E+00	1.07E+00	1.99E+01	3.69E-01	-1.17E+03
PERM	MJ	8.54E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-9.53E+03	-1.90E+02	0.00E+00
PERT	MJ	1.38E+03	1.21E+00	3.03E-02	0.00E+00	1.07E+00	-9.53E+03	-1.90E+02	-1.17E+03
PENRE	MJ	3.17E+03	9.33E+01	1.11E+00	0.00E+00	9.46E+01	1.15E+02	1.91E+01	-6.74E+03
PENRM	MJ	9.71E+01	0.00E+00	2.20E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRT	MJ	3.27E+03	9.33E+01	3.30E+00	0.00E+00	9.46E+01	1.15E+02	1.91E+01	-6.74E+03
SM	kg	2.21E+00	2.63E-02	5.44E-02	0.00E+00	2.63E-02	4.33E-02	7.89E-03	-5.25E-01
RSF	MJ	2.03E+03	2.32E-04	6.49E-06	0.00E+00	2.65E-04	6.95E-05	2.68E-04	-3.62E-03
NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	m ³	1.44E+00	1.24E-02	-1.70E-03	0.00E+00	1.23E-02	9.65E-02	1.87E-02	-5.04E+00
Acronyms	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRT = Total use of non-renewable primary energy re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water								

Waste indicators

Results per functional or declared unit									
Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
HW	kg	7.56E+00	1.00E-01	4.84E-04	0.00E+00	1.25E-01	4.72E-01	6.88E-03	-4.45E+01
NHW	kg	2.96E+02	1.74E+00	8.21E+00	0.00E+00	2.06E+00	2.57E+01	7.85E+01	-2.29E+03
RW	kg	1.23E-02	6.43E-04	1.54E-07	0.00E+00	6.33E-04	8.26E-04	1.26E-05	-2.90E-02
Acronyms	HW = Hazardous waste disposed; NHW = Non-hazardous waste disposed; RW = Radioactive waste disposed								

Output flow indicators

Results per functional or declared unit									
Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Material for recycling	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for energy recovery	kg	1.27E+02	0.00E+00	8.10E+00	0.00E+00	0.00E+00	6.04E+02	0.00E+00	0.00E+00
Exported energy, electricity	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.14E+03	0.00E+00	0.00E+00
Exported energy, thermal	MJ	9.71E+02	0.00E+00	6.20E+01	0.00E+00	0.00E+00	6.43E+03	0.00E+00	0.00E+00

Additional social and economic information

At Kronospan, we are proud of the environmental role we play in the overall wood supply chain. By producing wood-based panels using wood residue from the sawmill industry, we help to ensure that timber is valued as a limited raw material.

For us, setting high environmental standards comes naturally. A leader in technical development, we aim to get the highest possible yield from our input materials. The result is cost-effective production with the lowest environmental impact possible.

Together with our suppliers, we strive to achieve the lowest possible environmental impact.

We ensure the lowest possible environmental impact to soil, water and air.

We promote maximum recycling as well as accelerating recycling of wood residue from other producers.

We handle, use, store and destroy chemicals in safe, healthy and environmentally friendly ways.

We use solar, wind and combined heat and power plants to generate green electricity.

We are continuously investing in new, more efficient equipment and machinery - with superior technologies for a better environment.

We apply the principles of the circular economy - reduce, recycle, reuse.

We collect wood responsibly, supported by recycling and sustainable forestry, to produce carbon negative boards.

Kronospan is working towards a more sustainable wood-based panel industry. We ensure that suppliers do not use wood from national parks, natural preserves, virgin forests and other conservation areas.

References

General Programme Instructions of the International EPD® System. Version 4.0.

PCR 2019:14 Construction products (EN 15804:A2) (1.3.3).

ISO 14020:2023 Environmental statements and programmes for products. Principles and general requirements.

ISO 14025:2010 Environmental labels and declarations – Type III environmental declarations. Principles and procedures.

ISO 14040:2006 Environmental management. Life cycle assessment. Principles and frameworks.

ISO 14044:2006 Environmental management. Life cycle assessment. Requirements and guidelines.

EN 15804:2012+A2:2019 Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products.

EN 16449:2014 Wood and wood-based products - Calculation of the biogenic carbon content of wood and conversion to carbon dioxide.

EN 16485:2014 Round and sawn timber. Environmental Product Declarations. Product category rules for wood and wood-based products for use in construction.

LCA background report 24.04.2024.

