

Environmental Product Declaration

Superfine®
PARTICLEBOARD

Environmental Product Declaration

In accordance with ISO 14025 and EN 15804+A2:2019
for: Superfine® (Standard and MR)
by Laminex® New Zealand

Programme:	The International EPD® System www.environdec.com
Programme operator:	EPD Australasia Ltd. www.epd-australasia.com
EPD registration number:	S-P-09355
Version:	1.2
Version date:	2024-03-07
Owner's Name:	Laminex® New Zealand
Product name:	Superfine®
Valid from:	2023-11-27
Valid until:	2028-11-27
Geographical scope:	New Zealand

The products covered in the EPD are listed on page 6.

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 <https://epd-australasia.com/>



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Company Information	04
Product Information	06
Products Covered by EPD	06
Packaging	06
Content Declaration	07
Manufacturing Process	08
System Boundaries	09
Production	10
Recovery and Recycling Potential	11
Life Cycle Inventory	11
Upstream Data	11
Transport	11
Cut off Criteria	11
Allocation	11
Assessment Indicators	12
Environmental Performance	15
Results for Additional Scenarios	45
Material Circularity Indicators (MCIs)	49
References	50

Laminex® New Zealand is a supplier of high-quality countertops, vertical panel products and timber based building products, contributing to the creation of inspiring spaces in New Zealand.

Laminex® manufactures Melteca® decorated board and particleboard in Hamilton and Taupo respectively, with the rest of the portfolio range featuring locally made and globally sourced products for benchtops, cabinetry, wall linings, structural flooring and wood-based building products; it includes popular and innovative brands such as Laminex® & Formica® Laminate, Seratone®, Caesarstone®, Surround by Laminex®, HIMACS, Strandfloor®, and Laminam®.

With a commitment to being the easiest to do business with, Laminex® New Zealand ensures it has a high quality range of products that reflect leading-edge innovation, international trends and insights, supported by expert technical knowledge and excellent service.

The Laminex® operational site at Taupo is conducted under a quality management system, accredited to ISO 9001 standards. Both Hamilton and Taupo also operate under certified environmental management systems, accredited to ISO14001 standards.

As a large manufacturer of wood products, we respect and support responsible forest management and are committed to producing quality products that are backed by the certifications.

Laminex® New Zealand (FSC-C102329) has achieved Forest Stewardship Council (FSC®) and Programme for the Endorsement of Forest Certification (PEFC), Chain of Custody certification for all our local manufacturing plants, along with the entire supply chain. This means that all certified wood products from these plants are produced using responsibly sourced wood fibres.



Laminex® National Footprint



Products Covered by EPD

This product specific EPD covers two types of Laminex® Superfine® particleboard (Superfine® Standard and Superfine® Moisture Resistant (MR)) manufactured at Laminex® New Zealand’s manufacturing facility located in Taupo. This EPD covers 12 Superfine® Standard and 10 Superfine® MR products. The products are not grouped. Superfine® particleboard is typically used in the construction of furniture, and when laminated, is used in cabinets and general-purpose interior building panels.

Table 1: Industry Classification

Product	Classification	Code	Category
Superfine® Standard and Superfine® MR	UN CPC Ver.2	31431	Particleboard
	ANZSIC 2006	1494	Reconstituted Wood Product Manufacturing

Table 2: Products covered by this EPD

Product	Registration number
Superfine® Standard 9mm	S-P-09355-01
Superfine® Standard 12mm	S-P-09355-02
Superfine® Standard 16mm	S-P-09355-03
Superfine® Standard 18mm	S-P-09355-04
Superfine® Standard 25mm	S-P-09355-05
Superfine® Standard 28.5mm	S-P-09355-06
Superfine® Standard 30mm	S-P-09355-07
Superfine® Standard 35mm	S-P-09355-08
Superfine® MR 9mm	S-P-09355-09
Superfine® MR 12mm	S-P-09355-10
Superfine® MR 16mm	S-P-09355-11
Superfine® MR 18mm	S-P-09355-12
Superfine® MR 25mm	S-P-09355-13
Superfine® MR 30mm	S-P-09355-14
Superfine® MR 35mm	S-P-09355-15

Declared Unit

The Declared unit for the EPD is 1m² of Superfine® Particleboard at the factory gate.

Packaging

Once a given product is created, it is packed using:

1. Top and bottom particleboard cover sheets, manufactured at the Laminex® Taupo plant
2. Wooden bearers, manufactured at the Laminex® Taupo plant
3. PET strapping
4. Cardboard banner, depicting brand, product and key Health, Safety and Environmental information.

Coversheets and bearers are collected and reused by Laminex®.

The PET strapping and cardboard are recyclable.

A1-A3 results include the balancing-out reporting of the biogenic CO₂ of packaging released in module A5.

Dangerous Substances from the Candidate List of SVHC for Authorisation

None of the materials in this EPD are on the Candidate List of substances of very high concern (SVHC), by the European REACH Regulation at a concentration greater than 0.1% by mass.

Content Declaration

Table 3: Composition of Superfine® and Superfine® MR Products (per 1 m² of product)

Product components	CAS Number	Weight (%)	Weight (kg/m ²)	Post-consumer material, weight %	Biogenic material, weight %	Biogenic material kg C/m ²
Mixed softwoods (saw dust and shavings, mainly pine species)	N/A	83.9-88.1	4.81-18.9	0	83.9-88.1	2.40-9.07
Polymerised urea formaldehyde resin - Superfine®/Polymerised melamine urea formaldehyde resin - Superfine® MR	9011-05-6/25036-13-9	9.05-13.2	0.318-2.20	0	0	0
Paraffin wax	8002-74-2	0.70-1.25	0.0332-0.315	0	0	0
Free formaldehyde	50-00-0	<0.0001	0.0151-0.111	0	0	0
Water		7	0.410-1.59	0	0	0
Total		100	5.79-20.9	0	83.9-88.1	2.40-9.07

Table 4: Composition of SuperFine® and Superfine® MR Packaging (per 1 m² of product)

Packaging materials	Weight (kg/m ²)	Weight % (versus the product)	Biogenic material, weight % (versus the product)	Weight biogenic carbon, kg C/m ²
Mixed softwoods (saw dust and shavings, mainly pine species)	0.261-0.893	2.51-6.17	1.17-2.88	0.122-0.417
Polymerised urea formaldehyde resin - Superfine®/ Polymerised melamine urea formaldehyde resin - Superfine® MR	0.0268-0.0663	0.254-0.577	0	0
Paraffin wax	0.00113-0.00297	0.00633-0.00256	0	0
Free formaldehyde	7.97E-4-0.0239	0.00753-0.229	0	0
Total	0.346-0.962	3.31-6.67	1.17-2.88	0.122-0.417

Manufacturing Process

Superfine® particleboard is made from NZ Pinus Radiata saw dust and shavings. This material is a co-product of the neighbouring Tenon Clearwod Sawmill. The wood fibre is conveyed and trucked from Tenon to the Laminex® Taupo Plant and stored in silos.

Saw dust and shavings are mixed and dried in a rotating drum dryer. The dryer is heated by a biomass furnace burning waste dust from the Superfine® process together with bark from Tenon Sawmill.

After drying, the wood fibre is sorted by size using a shaker screen. Large particles are used in the core of the board, while fine particles form the board surface. Any dust that is too small is used to power the furnace.

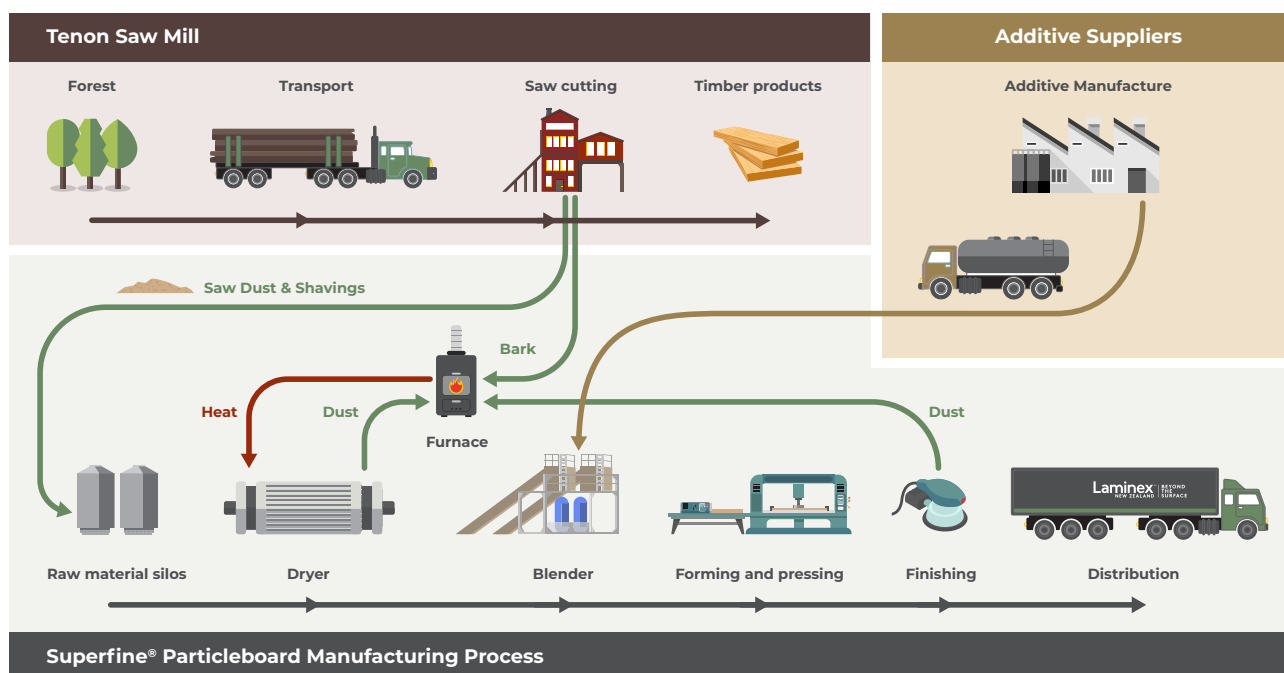
Wax emulsion, water and resin are added to the wood fibres in a mechanical blender. The fibres are passed

through the forming station which arranges the fibres by mass in a mattress on a steel belt. To create the board, a layer of small fibres is placed on the bottom of the mattress, then larger core material is added, before the fine top surface is applied.

The mattress is pressed in the hydraulic press at 200°C to cure the thermosetting resin. Once the resin is cured the boards are cooled and stacked before sanding and cutting.

Any dust waste is used in the furnace for energy. Once finished boards are quality checked, they are stacked, strapped, and wrapped. Product is stored in the warehouse, where it is then despatched to our customers.

Figure 1: Superfine® Particleboard Manufacturing Process



As shown in the table below, this EPD is of the type Cradle to gate with modules C1-C4 and module D (A1-A3 + C + D). Other life cycle stages (Modules A4-A5, B1-B7) are dependent on particular scenarios and best modelled at the building level.

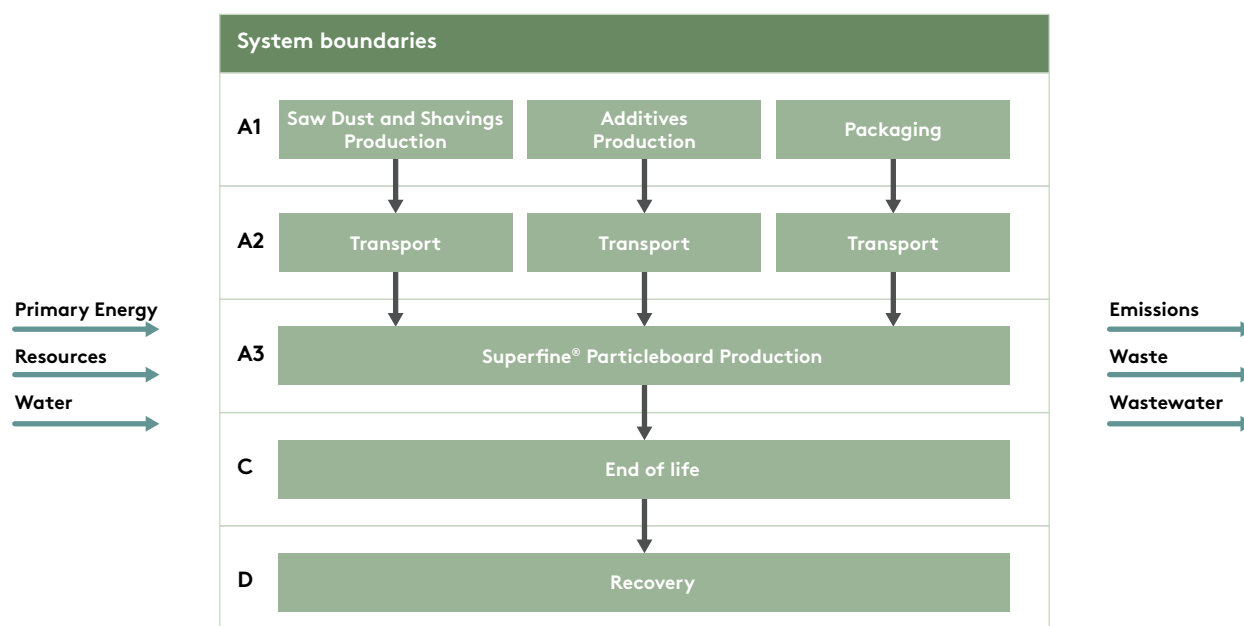
Table 5: Modules Included in the Scope of the EPD

	Product stage			Construction process stage		Use stage							End of life stage				Resource recovery
	Raw material supply	Transport of raw materials	Manufacturing	Transport	Construction / Installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction / Demolition	Transport to waste processing	Waste processing	Disposal	Reuse - Recovery - Recycling potential
Module	A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Modules Declared	X	X	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	X	X	X	X	X
Geography	NZ	NZ	NZ										NZ	NZ	NZ	NZ	NZ
Specific Data	49-53%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation: Products	0%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation: Sites	0%			-	-	-	-	-	-	-	-	-	-	-	-	-	-

X = included in the EPD; ND = Module not declared (such a declaration shall not be regarded as an indicator result of zero)

The processes below are included in the product system to be studied. For modules beyond A3, the scenarios included are currently in use and are representative for one of the most probable alternatives.

Figure 2: Superfine® System Boundaries



Production (Module A1-A3)

The production stage includes the environmental impacts associated with raw materials extraction and processing of inputs, transport to, between and within the manufacturing site, manufacturing of average product at the exit gate of the manufacturing site and transport of product to customer.

Module A1 (raw material supply)

Includes the source of wood fibre, production of resins and additives, generation and transmission of electricity in New Zealand and the generation of thermal energy from biomass and LPG.

Module A2 (transportation)

Includes the transportation of wood shavings and sawdust from Tenon via conveyor, which runs on electricity to the factory in Taupo. Transport resins and wax used in the manufacture of the product that is a combination of truck and sea freight.

Module A3 (manufacturing)

Includes the production of ancillary materials, on-site transport by forklift and the recycling and landfill of manufacturing waste.

Since Module C is included in the EPD, the use of Module A1-A3 results without considering the results of Module C is discouraged.

End of Life Stage (Module C)

When a building reaches its end-of-life, Superfine® particleboard products are disposed of. The end-of-life stage (Modules C1-C4) are modelled on the assumption that currently landfill is the main end-of-life option for discarded particleboards. This means that module C3 is equal to zero as no waste processing is required.

Module C1 (deconstruction/demolition)

Includes dismantling the particleboards after use. Dismantling includes use of a diesel fuelled excavator.

Module C2 (transport to end-of-life)

Includes transport of waste Superfine® particleboard to landfill after demolition of the building where it was used.

Module C4 (disposal)

Includes Superfine® particleboard panel end-of-life in landfill.

The emission of biogenic CO₂ in landfill is calculated, following EN 15804, which does not allow consideration of permanent storage. The biogenic carbon balances in A1-A3 and C4, but due to methane emissions during production and landfill the GWP-biogenic values don't balance.

Table 6: End of Life Scenarios for Products

Process	Unit per declared unit
Collection process	0 kg collected separately
	1 m ² particleboard (5.79-20.9 kg) collected with mixed construction waste
Recovery system	0 kg for re-use
	0 kg for recycling
	0 kg for energy recovery
Disposal specified by type	1 m ² particleboard (5.79-20.9 kg) product or material for final deposition
Assumptions for scenario development, e.g. transportation	Diesel consumption for dismantling particleboard after use with an Excavator (100kW): 0.172g per kg of particleboard. All particleboard waste is transported from construction site to landfill via truck. Transport distance is assumed to be 50km with a capacity utilisation of 85%

Recovery and Recycling Potential (Module D)

The resource recovery stage (Module D) is modelled based on the assumption that currently landfill is the main end-of-life option for discarded particleboards. Materials that are sent to landfills at end-of-life are linked to an inventory that accounts for waste composition, regional leakage rates, landfill gas capture, and utilisation rates (flaring vs. power production). All landfill gas that is combusted for energy recovery is assumed to be used to generate electricity via an alternator. A credit is assigned for power output using the New Zealand grid mix. This results in a credit for Module D.

Life Cycle Inventory (LCI) Data and Assumption

Upstream Data

Primary data was used for all manufacturing operations up to the factory gate, including upstream data for production of board by Laminex®. Primary data for Laminex® operations was collected for the 12-month period between 1st July 2020 to 30th June 2021. No changes to production technology have occurred since the data collection period and hence the data continues to be representative of current practice.

LCA Software and Database

Sphera Solutions LCA for Experts (LCAFE) software version 10.7.0.183 was used together with Sphera Managed LCA Content database version 2022.2 (Sphera 2022) for all the data in the background system. Most datasets have a reference year between 2017 and 2021 and all fall within the 10-year limit allowable for generic data under EN 15804.

Electricity

The composition of the electricity grid mix is modelled in LCAFE and updated annually. The New Zealand electricity grid consumption mix 2018) is made up of hydro (59.30%), geothermal (17.96%) natural gas (12.93%), wind (4.66%), hard coal gases (2.15%) hard coal (1.36%), biomass (0.70%), biogas (0.63%), and photovoltaics (0.22%), lignite (0.05%) and fuel oil (0.03%). The emission factor for the New Zealand national grid for the GWP-GHG indicator is 0.133 kg CO₂e/kWh.

Transport

Primary transport data was used for transport of production inputs (A2). Resins and wax were assumed to be transported from China. Any wastes from the production process (A3) are assumed to be transported over a 50 km distance to a treatment or disposal site.

Cut off Criteria

Environmental impacts from infrastructure, construction, production equipment, and tools that are not directly consumed in the production process, ('capital goods') are excluded as per PCR 2019:14 v1.3.1 (IEPDS, 2019).

Personnel-related processes are excluded as per section 4.3.2 in the PCR (EPD International, 2023).

The production and end-of-life processes of infrastructure or capital goods used in the production system are excluded as per section 4.3.2 in the PCR (ibid). Infrastructure used electricity generation is included as standard in the LCAFE datasets, as this is important for renewable generation.

All other reported data were incorporated and modelled using the best available life cycle inventory data.

Allocation

Where subdivision of processes was not possible, allocation rules listed in PCR chapter 4.5 have been applied. Where economic allocation was required (for wood-based materials), prices were based on a FY19 data. No secondary materials are used in the particleboards manufacturing.

End-of-life allocation follows the requirements of EN 15804:2017+A2:2019 § 6.4.3.3 and generally follows the polluter pays principle.

Assumptions

The Decomposition rate of organic carbon to landfill gas is assumed to be 1.6% (DOCF).

For every kilogram of carbon converted to landfill gas, 80% is assumed to be released as carbon dioxide and 20% is assumed to be released as methane.

Assessment Indicators

The results tables describe the different environmental indicators for each product per declared unit, for each declared module. The EN 15804 reference package based on EF 3.0 is used.

- Table 7 contains the core environmental impact indicators in accordance with EN 15804:2012+A2:2019, describing the potential environmental impacts of the product.
- Table 8 shows the life cycle inventory indicators for resource use.
- Table 9 displays the life cycle inventory indicators for waste and other outputs.
- Table 10 provides additional environmental impact indicators in accordance with EN 15804:2012+A2:2019.
- Table 11 displays biogenic carbon content indicators.
- Table 12 contains results for environmental impact indicators in accordance with EN 15804:2012+A1:2013 to aid backward comparability.

The estimated impact results are only relative statements, which do not indicate the endpoints of the impact categories, exceeding threshold values, safety margins and/or risks.

Energy indicators (MJ) are always given as net calorific value.

Table 7: EN15804+A2 Core Environmental Impact Indicators

Impact category	Abbreviation	Unit
Global warming potential – total	GWP-total	kg CO ₂ -eq.
Global warming potential – fossil	GWP-fossil	kg CO ₂ -eq.
Global warming potential – biogenic	GWP-biogenic	kg CO ₂ -eq.
Global warming potential – land use and land use change	GWP-luluc	kg CO ₂ -eq.
Depletion potential of the stratospheric ozone layer	ODP	kg CFC11-eq.
Acidification potential - terrestrial and freshwater	AP	Mole of H ⁺ eq.
Eutrophication potential - freshwater	EP-freshwater	kg P eq.
Eutrophication potential - marine	EP-marine	kg N eq.
Eutrophication potential - terrestrial	EP-terrestrial	Mole of N eq.
Photochemical ozone formation potential	POFP	kg NMVOC eq.
Abiotic depletion potential – minerals & met*	ADP-m&m	kg Sb-eq.
Abiotic depletion potential – fossil fuels*	ADP-fossil	MJ
Water scarcity*	WDP	m ³ world equiv.

* The results of this environmental impact indicator should be used with care as the uncertainties on these results are high as there is limited experience with the indicator.

Table 8: Life Cycle Inventory Indicators on Use of Resources

Indicator	Abbreviation	Unit
Renewable primary energy as energy carrier	PERE	MJ
Renewable primary energy resources as material utilization	PERM	MJ
Total use of renewable primary energy resources	PERT	MJ
Non-renewable primary energy as energy carrier	PENRE	MJ
Non-renewable primary energy as material utilization	PENRM	MJ
Total use of non-renewable primary energy resources	PENRT	MJ
Use of secondary material	SM	kg
Use of renewable secondary fuels	RSF	MJ
Use of non-renewable secondary fuels	NRSF	MJ
Total use of net fresh water	FW	m ³

Table 9: Life Cycle Inventory Indicators on Waste Categories and Output Flows

Indicator	Abbreviation	Unit
Hazardous waste disposed	HWD	kg
Non-hazardous waste disposed	NHWD	kg
Radioactive waste disposed	RWD	kg
Components for reuse	CRU	kg
Materials for energy recovery	MER	kg
Materials for recycling	MFR	kg
Exported electrical energy	EEE	MJ
Exported thermal energy	EET	MJ

Table 10: EN15804+A2 Additional Environmental Impact Indicators

Indicator	Abbreviation	Unit
Global warming potential**	GWP-GHG	kg CO ₂ -eq
Respiratory inorganics	PM	Disease incidences
Ionising Radiation – human health***	IRP	kBq U235 eq.
Eco-toxicity (freshwater)*	ETP-fw	CTUe
Human Toxicity, cancer*	HTP-c	CTUh
Human Toxicity, non-cancer*	HTP-nc	CTUh
Land use related impacts/soil quality*	SQP	Dimensionless

Table 11: Biogenic Carbon Content Indicators

Indicator	Abbreviation	Unit
Biogenic carbon content - product	BCC-prod	kg C
Biogenic carbon content - packaging	BCC-pack	kg C

Note: 1 kg biogenic carbon is equivalent to 44/12 kg CO₂

Table 12: EN15804+A1 Environmental Impact Indicators

Indicator	Abbreviation	Unit
Global warming potential (total)	GWP (EN15804+A1)	kg CO ₂ -eq.
Depletion potential of the stratospheric ozone layer	ODP (EN15804+A1)	kg CFC11-eq.
Acidification potential of land and water	AP (EN15804+A1)	kg SO ₂ -eq.
Eutrophication potential	EP (EN15804+A1)	kg PO ₄ ³⁻⁻ -eq.
Photochemical ozone creation potential	POCP (EN15804+A1)	kg C ₂ H ₄ -eq.
Abiotic depletion potential for non-fossil resources - elements	ADPE (EN15804+A1)	kg Sb-eq.
Abiotic depletion potential for fossil resources	ADPF (EN15804+A1)	MJ

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

** This indicator is identical to GWP-total except that the CF for biogenic CO₂ is set to zero. It has been included in the EPD following the PCR.

*** This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and some construction materials, is also not measured by this indicator.

For Laminex Superfine® particleboards, the following indicators are not relevant, hence result in zero values:

- Components for re-use (CRU) is zero since there are none produced.
- Exported thermal energy (EET) is zero since there is none produced.

Environmental Performance

Results for 1 m² of S-P-09355-01 Superfine® Standard 9mm particleboard

Table 13: EN15804+A2 Core Environmental Impact Indicators

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
GWP-total	kg CO ² eq.	-7.66	0.00365	0.0177	0	10.3	-4.83E-04
GWP-fossil	kg CO ² eq.	1.64	0.00365	0.0177	0	0.583	-4.79E-04
GWP-biogenic	kg CO ² eq.	-9.30	5.20E-07	1.58E-05	0	9.74	-4.44E-06
GWP-luluc	kg CO ² eq.	1.65E-04	2.65E-08	1.29E-07	0	2.30E-04	-1.22E-07
ODP	kg CFC 11 eq.	1.20E-12	2.90E-16	1.41E-15	0	8.88E-13	-8.47E-16
AP	mol H ⁺ eq.	0.0136	1.74E-05	1.41E-04	0	0.00203	-1.79E-06
EP-freshwater	kg P eq.	2.36E-06	6.41E-10	3.12E-09	0	4.01E-07	-1.82E-09
EP-marine	kg N eq.	0.00366	8.39E-06	7.16E-05	0	5.53E-04	-5.12E-07
EP-terrestrial	mol N eq.	0.0486	9.19E-05	7.86E-04	0	0.00608	-7.09E-06
POCP	kg NMVOC eq.	0.0260	2.35E-05	1.33E-04	0	0.00170	-1.30E-06
ADP-m&m	kg Sb eq.	4.12E-07	4.45E-11	2.17E-10	0	5.46E-08	-9.35E-11
ADP-fossil	MJ	23.8	0.0484	0.236	0	7.74	-0.00473
WDP	m ³ world eq. deprived	1.05	2.71E-05	1.32E-04	0	-0.00675	-7.62E-04

Table 14: Use of Resources

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
PERE	MJ	20.2	2.25E-04	0.00110	0	0.931	-0.0242
PERM	MJ	103	0	0	0	0	0
PERT	MJ	123	2.25E-04	0.00110	0	0.931	-0.0242
PENRE	MJ	19.0	0.0484	0.236	0	7.75	-0.00473
PENRM	MJ	4.82	0	0	0	0	0
PENRT	MJ	23.8	0.0484	0.236	0	7.75	-0.00473
SM	kg	0	0	0	0	0	0
RSF	MJ	9.56E-27	0	0	0	0	0
NRSF	MJ	1.12E-25	0	0	0	0	0
FWT	m ³	0.0887	4.07E-07	1.99E-06	0	7.25E-04	-6.22E-05

Table 15: Waste Production and Output Flows

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
HWD	kg	1.54E-09	5.25E-14	2.56E-13	0	5.01E-10	-3.37E-13
NHWD	kg	0.0425	6.91E-07	3.37E-06	0	5.85	-3.88E-06
RWD	kg	1.94E-04	7.09E-10	3.46E-09	0	4.72E-05	-2.43E-09
CRU	kg	0	0	0	0	0	0
MER	kg	0.0595	0	0	0	0	0
MFR	kg	1.18	0	0	0	0	0
EEE	MJ	0	0	0	0	0.0131	0
EET	MJ	0	0	0	0	0	0

Table 16: EN15804+A2 Additional Environmental Impact Indicators

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
GWP-GHG	kg CO ₂ -eq	1.65	0.00365	0.0177	0	1.03	-4.84E-04
PM	Disease incidences	1.67E-07	1.96E-10	8.36E-10	0	1.58E-08	-1.21E-11
IR	kBq U235 eq.	0.0166	9.19E-08	4.48E-07	0	0.00470	-2.79E-07
ETP-fw	CTUe	54.8	0.0122	0.0593	0	4.00	-0.0587
HTP-c	CTUh	1.20E-08	2.04E-13	1.01E-12	0	3.17E-10	-2.84E-13
HTP-nc	CTUh	1.33E-08	1.28E-11	5.43E-11	0	3.11E-08	-1.31E-12
SQP	Dimensionless	21.7	1.11E-04	5.42E-04	0	0.494	-0.00301

Table 17: Biogenic Carbon Content

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
BCC-prod	kg C	2.54	0	0	0	0	0
BCC-pack	kg C	0.174	0	0	0	0	0

Note: 1 kg biogenic carbon is equivalent to 44/12 kg CO₂

Table 18: EN15804+A1 Environmental Impact Indicators

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
GWP	kg CO ₂ -eq.	-8.02	0.00360	0.0174	0	10.2	-4.73E-04
ODP	kg CFC-11 eq.	1.42E-12	3.41E-16	1.66E-15	0	1.05E-12	-9.98E-16
AP	kg SO ₂ eq.	0.00954	1.21E-05	9.55E-05	0	0.00160	-1.26E-06
EP	kg PO ₄ ³⁻ eq.	0.00180	2.81E-06	2.41E-05	0	1.92E-04	-2.39E-07
POCP	kg C ₂ H ₄ eq.	0.0209	1.19E-06	-4.48E-05	0	1.69E-04	-7.62E-08
ADPE	kg Sb eq.	4.13E-07	4.45E-11	2.17E-10	0	5.49E-08	-9.34E-11
ADPF	MJ	15.2	0.0484	0.236	0	7.60	-0.00470

Results for 1 m² of S-P-09355-02 Superfine® Standard 12mm particleboard

Table 19: EN15804+A2 Core Environmental Impact Indicators

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
GWP-total	kg CO ₂ -eq.	-10.3	0.00487	0.0236	0	13.8	-6.45E-04
GWP-fossil	kg CO ₂ eq.	2.10	0.00487	0.0235	0	0.778	-6.38E-04
GWP-biogenic	kg CO ₂ -eq.	-12.4	6.94E-07	2.11E-05	0	13.0	-5.93E-06
GWP-luluc	kg CO ₂ eq.	2.12E-04	3.53E-08	1.72E-07	0	3.07E-04	-1.63E-07
ODP	kg CFC 11 eq.	1.54E-12	3.86E-16	1.88E-15	0	1.18E-12	-1.13E-15
AP	mol H ⁺ eq.	0.0174	2.31E-05	1.88E-04	0	0.00271	-2.39E-06
EP-freshwater	kg P eq.	3.03E-06	8.54E-10	4.16E-09	0	5.35E-07	-2.42E-09
EP-marine	kg N eq.	0.00468	1.12E-05	9.55E-05	0	7.38E-04	-6.82E-07
EP-terrestrial	mol N eq.	0.0621	1.22E-04	0.00105	0	0.00811	-9.46E-06
POCP	kg NMVOC eq.	0.0331	3.13E-05	1.77E-04	0	0.00227	-1.73E-06
ADP-m&m	kg Sb eq.	5.27E-07	5.94E-11	2.89E-10	0	7.29E-08	-1.25E-10
ADP-fossil	MJ	30.4	0.0645	0.315	0	10.3	-0.00630
WDP	m ³ world eq. deprived	1.35	3.61E-05	1.76E-04	0	-0.00901	-0.00102

Table 20: Use of Resources

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
PERE	MJ	26.1	3.00E-04	0.00146	0	1.24	-0.0323
PERM	MJ	133	0	0	0	0	0
PERT	MJ	159	3.00E-04	0.00146	0	1.24	-0.0323
PENRE	MJ	24.2	0.0645	0.315	0	10.3	-0.00631
PENRM	MJ	6.27	0	0	0	0	0
PENRT	MJ	30.4	0.0645	0.315	0	10.3	-0.00631
SM	kg	0	0	0	0	0	0
RSF	MJ	1.23E-26	0	0	0	0	0
NRSF	MJ	1.45E-25	0	0	0	0	0
FWT	m ³	0.115	5.43E-07	2.65E-06	0	9.67E-04	-8.29E-05

Table 21: Waste Production and Output Flows

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
HWD	kg	1.96E-09	7.00E-14	3.41E-13	0	6.68E-10	-4.50E-13
NHWD	kg	0.0549	9.22E-07	4.49E-06	0	7.80	-5.18E-06
RWD	kg	2.47E-04	9.46E-10	4.61E-09	0	6.29E-05	-3.24E-09
CRU	kg	0	0	0	0	0	0
MER	kg	0.0769	0	0	0	0	0
MFR	kg	1.31	0	0	0	0	0
EEE	MJ	0	0	0	0	0.0175	0
EET	MJ	0	0	0	0	0	0

Table 22: EN15804+A2 Additional Environmental Impact Indicators

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
GWP-GHG	kg CO ₂ -eq	2.11	0.00487	0.0236	0	1.37	-6.45E-04
PM	Disease incidences	2.13E-07	2.62E-10	1.11E-09	0	2.11E-08	-1.62E-11
IR	kBq U235 eq.	0.0212	1.22E-07	5.97E-07	0	0.00627	-3.72E-07
ETP-fw	CTUe	70.6	0.0162	0.0790	0	5.34	-0.0783
HTP-c	CTUh	1.53E-08	2.72E-13	1.35E-12	0	4.23E-10	-3.78E-13
HTP-nc	CTUh	1.70E-08	1.70E-11	7.24E-11	0	4.15E-08	-1.75E-12
SQP	Dimensionless	27.7	1.48E-04	7.22E-04	0	0.659	-0.00401

Table 23: Biogenic Carbon Content

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
BCC-prod	kg C	3.39	0	0	0	0	0
BCC-pack	kg C	0.117	0	0	0	0	0

Note: 1 kg biogenic carbon is equivalent to 44/12 kg CO₂

Table 24: EN15804+A1 Environmental Impact Indicators

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
GWP	kg CO ₂ -eq.	-10.8	0.00480	0.0232	0	13.5	-6.31E-04
ODP	kg CFC-11 eq.	1.82E-12	4.55E-16	2.22E-15	0	1.39E-12	-1.33E-15
AP	kg SO ₂ eq.	0.0122	1.61E-05	1.27E-04	0	0.00214	-1.68E-06
EP	kg PO ₄ ³⁻ eq.	0.00230	3.75E-06	3.21E-05	0	2.57E-04	-3.19E-07
POCP	kg C ₂ H ₄ eq.	0.0265	1.59E-06	-5.97E-05	0	2.25E-04	-1.02E-07
ADPE	kg Sb eq.	5.29E-07	5.94E-11	2.89E-10	0	7.33E-08	-1.25E-10
ADPF	MJ	19.5	0.0645	0.315	0	10.1	-0.00627

Results for 1 m² of S-P-09355-03 Superfine® Standard 16mm particleboard

Table 25: EN15804+A2 Core Environmental Impact Indicators

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
GWP-total	kg CO ₂ -eq.	-14.1	0.00649	0.0314	0	18.5	-8.65E-04
GWP-fossil	kg CO ₂ eq.	2.56	0.00649	0.0314	0	1.04	-8.57E-04
GWP-biogenic	kg CO ₂ -eq.	-16.7	9.25E-07	2.82E-05	0	17.4	-7.96E-06
GWP-luluc	kg CO ₂ eq.	2.66E-04	4.71E-08	2.29E-07	0	4.10E-04	-2.19E-07
ODP	kg CFC 11 eq.	1.93E-12	5.15E-16	2.51E-15	0	1.59E-12	-1.52E-15
AP	mol H ⁺ eq.	0.0202	3.09E-05	2.50E-04	0	0.00363	-3.21E-06
EP-freshwater	kg P eq.	3.85E-06	1.14E-09	5.55E-09	0	7.16E-07	-3.25E-09
EP-marine	kg N eq.	0.00547	1.49E-05	1.27E-04	0	9.89E-04	-9.16E-07
EP-terrestrial	mol N eq.	0.0726	1.63E-04	0.00140	0	0.0109	-1.27E-05
POCP	kg NMVOC eq.	0.0411	4.18E-05	2.36E-04	0	0.00305	-2.33E-06
ADP-m&m	kg Sb eq.	6.31E-07	7.91E-11	3.86E-10	0	9.77E-08	-1.67E-10
ADP-fossil	MJ	36.1	0.0861	0.420	0	13.9	-0.00847
WDP	m ³ world eq. deprived	1.78	4.81E-05	2.35E-04	0	-0.0122	-0.00136

Table 26: Use of Resources

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
PERE	MJ	34.5	4.00E-04	0.00195	0	1.66	-0.0433
PERM	MJ	178	0	0	0	0	0
PERT	MJ	213	4.00E-04	0.00195	0	1.66	-0.0433
PENRE	MJ	28.3	0.0861	0.420	0	13.9	-0.00847
PENRM	MJ	7.82	0	0	0	0	0
PENRT	MJ	36.1	0.0861	0.420	0	13.9	-0.00847
SM	kg	0	0	0	0	0	0
RSF	MJ	1.66E-26	0	0	0	0	0
NRSF	MJ	1.95E-25	0	0	0	0	0
FWT	m ³	0.152	7.24E-07	3.53E-06	0	0.00130	-1.11E-04

Table 27: Waste Production and Output Flows

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
HWD	kg	2.35E-09	9.34E-14	4.55E-13	0	8.96E-10	-6.04E-13
NHWD	kg	0.0721	1.23E-06	5.99E-06	0	10.4	-6.95E-06
RWD	kg	2.82E-04	1.26E-09	6.15E-09	0	8.43E-05	-4.35E-09
CRU	kg	0	0	0	0	0	0
MER	kg	0.103	0	0	0	0	0
MFR	kg	1.26	0	0	0	0	0
EEE	MJ	0	0	0	0	0.0235	0
EET	MJ	0	0	0	0	0	0

Table 28: EN15804+A2 Additional Environmental Impact Indicators

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
GWP-GHG	kg CO ₂ -eq	2.56	0.00649	0.0314	0	1.84	-8.66E-04
PM	Disease incidences	2.46E-07	3.49E-10	1.49E-09	0	2.83E-08	-2.17E-11
IR	kBq U235 eq.	0.0243	1.63E-07	7.96E-07	0	0.00840	-5.00E-07
ETP-fw	CTUe	92.2	0.0216	0.105	0	7.16	-0.105
HTP-c	CTUh	1.75E-08	3.63E-13	1.80E-12	0	5.67E-10	-5.08E-13
HTP-nc	CTUh	2.12E-08	2.27E-11	9.66E-11	0	5.56E-08	-2.35E-12
SQP	Dimensionless	35.9	1.98E-04	9.63E-04	0	0.882	-0.00539

Table 29: Biogenic Carbon Content

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
BCC-prod	kg C	4.55	0	0	0	0	0
BCC-pack	kg C	0.154	0	0	0	0	0

Note: 1 kg biogenic carbon is equivalent to 44/12 kg CO₂

Table 30: EN15804+A1 Environmental Impact Indicators

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
GWP	kg CO ₂ -eq.	-14.7	0.00640	0.0310	0	18.2	-8.47E-04
ODP	kg CFC-11 eq.	2.28E-12	6.06E-16	2.96E-15	0	1.87E-12	-1.79E-15
AP	kg SO ₂ eq.	0.0142	2.14E-05	1.70E-04	0	0.00287	-2.26E-06
EP	kg PO ₄ ³⁻ eq.	0.00268	4.99E-06	4.28E-05	0	3.44E-04	-4.28E-07
POCP	kg C ₂ H ₄ eq.	0.0336	2.12E-06	-7.96E-05	0	3.02E-04	-1.37E-07
ADPE	kg Sb eq.	6.32E-07	7.92E-11	3.86E-10	0	9.83E-08	-1.67E-10
ADPF	MJ	23.7	0.0860	0.419	0	13.6	-0.00842

Results for 1 m² of S-P-09355-04 Superfine® Standard 18mm particleboard

Table 31: EN15804+A2 Core Environmental Impact Indicators

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
GWP-total	kg CO ₂ -eq.	-15.9	0.00731	0.0354	0	20.8	-9.74E-04
GWP-fossil	kg CO ₂ eq.	2.86	0.00731	0.0353	0	1.17	-9.65E-04
GWP-biogenic	kg CO ₂ -eq.	-18.7	1.04E-06	3.17E-05	0	19.6	-8.96E-06
GWP-luluc	kg CO ₂ eq.	2.98E-04	5.29E-08	2.58E-07	0	4.62E-04	-2.47E-07
ODP	kg CFC 11 eq.	2.16E-12	5.79E-16	2.82E-15	0	1.79E-12	-1.71E-15
AP	mol H ⁺ eq.	0.0226	3.47E-05	2.82E-04	0	0.00409	-3.61E-06
EP-freshwater	kg P eq.	4.32E-06	1.28E-09	6.25E-09	0	8.06E-07	-3.66E-09
EP-marine	kg N eq.	0.00611	1.68E-05	1.43E-04	0	0.00111	-1.03E-06
EP-terrestrial	mol N eq.	0.0811	1.84E-04	0.00157	0	0.0122	-1.43E-05
POCP	kg NMVOC eq.	0.0459	4.70E-05	2.65E-04	0	0.00343	-2.62E-06
ADP-m&m	kg Sb eq.	7.05E-07	8.90E-11	4.34E-10	0	1.10E-07	-1.88E-10
ADP-fossil	MJ	40.3	0.0968	0.472	0	15.6	-0.00952
WDP	m ³ world eq. deprived	2.00	5.41E-05	2.64E-04	0	-0.0137	-0.00153

Table 32: Use of Resources

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
PERE	MJ	38.8	4.50E-04	0.00219	0	1.87	-0.0487
PERM	MJ	201	0	0	0	0	0
PERT	MJ	239	4.50E-04	0.00219	0	1.87	-0.0487
PENRE	MJ	31.6	0.0968	0.472	0	15.6	-0.00953
PENRM	MJ	8.78	0	0	0	0	0
PENRT	MJ	40.4	0.0968	0.472	0	15.6	-0.00953
SM	kg	0	0	0	0	0	0
RSF	MJ	1.86E-26	0	0	0	0	0
NRSF	MJ	2.19E-25	0	0	0	0	0
FWT	m ³	0.171	8.15E-07	3.97E-06	0	0.00146	-1.25E-04

Table 33: Waste Production and Output Flows

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
HWD	kg	2.63E-09	1.05E-13	5.12E-13	0	1.01E-09	-6.79E-13
NHWD	kg	0.0810	1.38E-06	6.74E-06	0	11.7	-7.82E-06
RWD	kg	3.15E-04	1.42E-09	6.92E-09	0	9.49E-05	-4.90E-09
CRU	kg	0	0	0	0	0	0
MER	kg	0.115	0	0	0	0	0
MFR	kg	1.30	0	0	0	0	0
EEE	MJ	0	0	0	0	0.0264	0
EET	MJ	0	0	0	0	0	0

Table 34: EN15804+A2 Additional Environmental Impact Indicators

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
GWP-GHG	kg CO ₂ -eq	2.87	0.00731	0.0353	0	2.07	-9.75E-04
PM	Disease incidences	2.75E-07	3.93E-10	1.67E-09	0	3.18E-08	-2.44E-11
IR	kBq U235 eq.	0.0271	1.84E-07	8.96E-07	0	0.00945	-5.63E-07
ETP-fw	CTUe	104	0.0243	0.119	0	8.05	-0.118
HTP-c	CTUh	1.95E-08	4.08E-13	2.03E-12	0	6.38E-10	-5.71E-13
HTP-nc	CTUh	2.37E-08	2.55E-11	1.09E-10	0	6.25E-08	-2.65E-12
SQP	Dimensionless	40.2	2.22E-04	0.00108	0	0.992	-0.00606

Table 35: Biogenic Carbon Content

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
BCC-prod	kg C	5.12	0	0	0	0	0
BCC-pack	kg C	0.173	0	0	0	0	0

Note: 1 kg biogenic carbon is equivalent to 44/12 kg CO₂

Table 36: EN15804+A1 Environmental Impact Indicators

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
GWP	kg CO ₂ -eq.	-16.5	0.00720	0.0349	0	20.5	-9.53E-04
ODP	kg CFC-11 eq.	2.56E-12	6.82E-16	3.32E-15	0	2.10E-12	-2.01E-15
AP	kg SO ₂ eq.	0.0159	2.41E-05	1.91E-04	0	0.00323	-2.54E-06
EP	kg PO ₄ ³⁻ eq.	0.00299	5.62E-06	4.82E-05	0	3.87E-04	-4.82E-07
POCP	kg C ₂ H ₄ eq.	0.0376	2.38E-06	-8.96E-05	0	3.39E-04	-1.54E-07
ADPE	kg Sb eq.	7.07E-07	8.91E-11	4.34E-10	0	1.11E-07	-1.88E-10
ADPF	MJ	26.5	0.0968	0.472	0	15.3	-0.00947

Results for 1 m² of S-P-09355-05 Superfine® Standard 25mm particleboard

Table 37: EN15804+A2 Core Environmental Impact Indicators

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
GWP-total	kg CO ₂ -eq.	-20.5	0.00968	0.0468	0	27.3	-0.00128
GWP-fossil	kg CO ₂ eq.	4.11	0.00968	0.0468	0	1.54	-0.00127
GWP-biogenic	kg CO ₂ -eq.	-24.6	1.38E-06	4.20E-05	0	25.8	-1.18E-05
GWP-luluc	kg CO ₂ eq.	4.17E-04	7.01E-08	3.42E-07	0	6.10E-04	-3.24E-07
ODP	kg CFC 11 eq.	3.04E-12	7.67E-16	3.74E-15	0	2.35E-12	-2.24E-15
AP	mol H ⁺ eq.	0.0339	4.60E-05	3.73E-04	0	0.00538	-4.75E-06
EP-freshwater	kg P eq.	5.98E-06	1.70E-09	8.28E-09	0	1.06E-06	-4.81E-09
EP-marine	kg N eq.	0.00914	2.22E-05	1.90E-04	0	0.00147	-1.35E-06
EP-terrestrial	mol N eq.	0.121	2.43E-04	0.00208	0	0.0161	-1.88E-05
POCP	kg NMVOC eq.	0.0643	6.23E-05	3.52E-04	0	0.00451	-3.44E-06
ADP-m&m	kg Sb eq.	1.04E-06	1.18E-10	5.75E-10	0	1.45E-07	-2.47E-10
ADP-fossil	MJ	59.5	0.128	0.625	0	20.5	-0.0125
WDP	m ³ world eq. deprived	2.68	7.17E-05	3.50E-04	0	-0.0179	-0.00202

Table 38: Use of Resources

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
PERE	MJ	51.7	5.96E-04	0.00291	0	2.46	-0.0641
PERM	MJ	264	0	0	0	0	0
PERT	MJ	316	5.96E-04	0.00291	0	2.46	-0.0641
PENRE	MJ	47.0	0.128	0.625	0	20.5	-0.0125
PENRM	MJ	12.6	0	0	0	0	0
PENRT	MJ	59.6	0.128	0.625	0	20.5	-0.0125
SM	kg	0	0	0	0	0	0
RSF	MJ	2.45E-26	0	0	0	0	0
NRSF	MJ	2.88E-25	0	0	0	0	0
FWT	m ³	0.228	1.08E-06	5.26E-06	0	0.00192	-1.65E-04

Table 39: Waste Production and Output Flows

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
HWD	kg	3.84E-09	1.39E-13	6.78E-13	0	1.33E-09	-8.93E-13
NHWD	kg	0.109	1.83E-06	8.93E-06	0	15.5	-1.03E-05
RWD	kg	4.83E-04	1.88E-09	9.16E-09	0	1.25E-04	-6.44E-09
CRU	kg	0	0	0	0	0	0
MER	kg	0.153	0	0	0	0	0
MFR	kg	1.95	0	0	0	0	0
EEE	MJ	0	0	0	0	0.0348	0
EET	MJ	0	0	0	0	0	0

Table 40: EN15804+A2 Additional Environmental Impact Indicators

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
GWP-GHG	kg CO ₂ -eq	4.12	0.00968	0.0468	0	2.72	-0.00128
PM	Disease incidences	4.16E-07	5.20E-10	2.21E-09	0	4.20E-08	-3.21E-11
IR	kBq U235 eq.	0.0414	2.43E-07	1.19E-06	0	0.0125	-7.39E-07
ETP-fw	CTUe	140	0.0322	0.157	0	10.6	-0.155
HTP-c	CTUh	2.99E-08	5.41E-13	2.69E-12	0	8.41E-10	-7.51E-13
HTP-nc	CTUh	3.32E-08	3.38E-11	1.44E-10	0	8.24E-08	-3.48E-12
SQP	Dimensionless	54.1	2.94E-04	0.00144	0	1.31	-0.00797

Table 41: Biogenic Carbon Content

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
BCC-prod	kg C	6.72	0	0	0	0	0
BCC-pack	kg C	0.240	0	0	0	0	0

Note: 1 kg biogenic carbon is equivalent to 44/12 kg CO₂

Table 42: EN15804+A1 Environmental Impact Indicators

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
GWP	kg CO ₂ -eq.	-21.4	0.00954	0.0462	0	26.9	-0.00125
ODP	kg CFC-11 eq.	3.59E-12	9.03E-16	4.40E-15	0	2.77E-12	-2.64E-15
AP	kg SO ₂ eq.	0.0238	3.20E-05	2.53E-04	0	0.00425	-3.34E-06
EP	kg PO ₄ ³⁻ eq.	0.00449	7.44E-06	6.38E-05	0	5.10E-04	-6.33E-07
POCP	kg C ₂ H ₄ eq.	0.0515	3.15E-06	-1.19E-04	0	4.47E-04	-2.02E-07
ADPE	kg Sb eq.	1.04E-06	1.18E-10	5.75E-10	0	1.46E-07	-2.47E-10
ADPF	MJ	38.2	0.128	0.625	0	20.1	-0.0124

Results for 1 m² of S-P-09355-06 Superfine® Standard 28.5mm particleboard

Table 43: EN15804+A2 Core Environmental Impact Indicators

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
GWP-total	kg CO ₂ -eq.	-23.4	0.0109	0.0525	0	30.8	-0.00144
GWP-fossil	kg CO ₂ eq.	4.38	0.0109	0.0525	0	1.74	-0.00143
GWP-biogenic	kg CO ₂ -eq.	-27.7	1.55E-06	4.71E-05	0	29.1	-1.33E-05
GWP-luluc	kg CO ₂ eq.	4.53E-04	7.87E-08	3.84E-07	0	6.85E-04	-3.65E-07
ODP	kg CFC 11 eq.	3.29E-12	8.61E-16	4.20E-15	0	2.65E-12	-2.53E-15
AP	mol H ⁺ eq.	0.0354	5.16E-05	4.19E-04	0	0.00606	-5.35E-06
EP-freshwater	kg P eq.	6.53E-06	1.90E-09	9.28E-09	0	1.19E-06	-5.42E-09
EP-marine	kg N eq.	0.00955	2.49E-05	2.13E-04	0	0.00165	-1.53E-06
EP-terrestrial	mol N eq.	0.127	2.73E-04	0.00233	0	0.0181	-2.11E-05
POCP	kg NMVOC eq.	0.0692	6.98E-05	3.94E-04	0	0.00508	-3.87E-06
ADP-m&m	kg Sb eq.	1.09E-06	1.32E-10	6.45E-10	0	1.63E-07	-2.79E-10
ADP-fossil	MJ	62.6	0.144	0.701	0	23.1	-0.0141
WDP	m ³ world eq. deprived	2.98	8.05E-05	3.92E-04	0	-0.0202	-0.00227

Table 44: Use of Resources

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
PERE	MJ	57.8	6.69E-04	0.00326	0	2.77	-0.0721
PERM	MJ	297	0	0	0	0	0
PERT	MJ	355	6.69E-04	0.00326	0	2.77	-0.0721
PENRE	MJ	49.1	0.144	0.701	0	23.1	-0.0141
PENRM	MJ	13.6	0	0	0	0	0
PENRT	MJ	62.7	0.144	0.701	0	23.1	-0.0141
SM	kg	0	0	0	0	0	0
RSF	MJ	2.76E-26	0	0	0	0	0
NRSF	MJ	3.25E-25	0	0	0	0	0
FWT	m ³	0.255	1.21E-06	5.90E-06	0	0.00216	-1.85E-04

Table 45: Waste Production and Output Flows

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
HWD	kg	4.06E-09	1.56E-13	7.61E-13	0	1.49E-09	-1.01E-12
NHWD	kg	0.121	2.05E-06	1.00E-05	0	17.4	-1.16E-05
RWD	kg	4.97E-04	2.11E-09	1.03E-08	0	1.41E-04	-7.25E-09
CRU	kg	0	0	0	0	0	0
MER	kg	0.172	0	0	0	0	0
MFR	kg	1.89	0	0	0	0	0
EEE	MJ	0	0	0	0	0.0391	0
EET	MJ	0	0	0	0	0	0

Table 46: EN15804+A2 Additional Environmental Impact Indicators

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
GWP-GHG	kg CO ₂ -eq	4.40	0.0109	0.0525	0	3.06	-0.00144
PM	Disease incidences	4.32E-07	5.84E-10	2.48E-09	0	4.72E-08	-3.61E-11
IR	kBq U235 eq.	0.0427	2.73E-07	1.33E-06	0	0.0140	-8.33E-07
ETP-fw	CTUe	155	0.0361	0.176	0	11.9	-0.175
HTP-c	CTUh	3.08E-08	6.07E-13	3.01E-12	0	9.45E-10	-8.45E-13
HTP-nc	CTUh	3.59E-08	3.79E-11	1.61E-10	0	9.27E-08	-3.92E-12
SQP	Dimensionless	59.5	3.30E-04	0.00161	0	1.47	-0.00897

Table 47: Biogenic Carbon Content

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
BCC-prod	kg C	7.57	0	0	0	0	0
BCC-pack	kg C	0.269	0	0	0	0	0

Note: 1 kg biogenic carbon is equivalent to 44/12 kg CO₂

Table 48: EN15804+A1 Environmental Impact Indicators

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
GWP	kg CO ₂ -eq.	-24.3	0.0107	0.0518	0	30.3	-0.00141
ODP	kg CFC-11 eq.	3.89E-12	1.01E-15	4.94E-15	0	3.12E-12	-2.98E-15
AP	kg SO ₂ eq.	0.0248	3.58E-05	2.84E-04	0	0.00478	-3.76E-06
EP	kg PO ₄ ³⁻ eq.	0.00468	8.35E-06	7.15E-05	0	5.73E-04	-7.13E-07
POCP	kg C ₂ H ₄ eq.	0.0560	3.54E-06	-1.33E-04	0	5.03E-04	-2.27E-07
ADPE	kg Sb eq.	1.10E-06	1.32E-10	6.45E-10	0	1.64E-07	-2.79E-10
ADPF	MJ	40.7	0.144	0.701	0	22.7	-0.0140

Results for 1 m² of S-P-09355-07 Superfine® Standard 30mm particleboard

Table 49: EN15804+A2 Core Environmental Impact Indicators

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
GWP-total	kg CO ₂ -eq.	-24.6	0.0114	0.0553	0	32.4	-0.00152
GWP-fossil	kg CO ₂ eq.	4.63	0.0114	0.0552	0	1.83	-0.00150
GWP-biogenic	kg CO ₂ -eq.	-29.2	1.63E-06	4.96E-05	0	30.6	-1.40E-05
GWP-luluc	kg CO ₂ eq.	4.78E-04	8.28E-08	4.04E-07	0	7.21E-04	-3.84E-07
ODP	kg CFC 11 eq.	3.47E-12	9.06E-16	4.42E-15	0	2.79E-12	-2.66E-15
AP	mol H ⁺ eq.	0.0373	5.43E-05	4.41E-04	0	0.00637	-5.63E-06
EP-freshwater	kg P eq.	6.89E-06	2.00E-09	9.77E-09	0	1.26E-06	-5.70E-09
EP-marine	kg N eq.	0.0101	2.62E-05	2.24E-04	0	0.00174	-1.61E-06
EP-terrestrial	mol N eq.	0.134	2.87E-04	0.00246	0	0.0191	-2.23E-05
POCP	kg NMVOC eq.	0.0731	7.35E-05	4.15E-04	0	0.00534	-4.08E-06
ADP-m&m	kg Sb eq.	1.16E-06	1.39E-10	6.79E-10	0	1.71E-07	-2.93E-10
ADP-fossil	MJ	66.1	0.151	0.738	0	24.3	-0.0148
WDP	m ³ world eq. deprived	3.14	8.47E-05	4.13E-04	0	-0.0213	-0.00239

Table 50: Use of Resources

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
PERE	MJ	60.9	7.04E-04	0.00343	0	2.92	-0.0759
PERM	MJ	313	0	0	0	0	0
PERT	MJ	374	7.04E-04	0.00343	0	2.92	-0.0759
PENRE	MJ	51.8	0.151	0.738	0	24.3	-0.0148
PENRM	MJ	14.3	0	0	0	0	0
PENRT	MJ	66.2	0.151	0.738	0	24.3	-0.0148
SM	kg	0	0	0	0	0	0
RSF	MJ	2.91E-26	0	0	0	0	0
NRSF	MJ	3.42E-25	0	0	0	0	0
FWT	m ³	0.268	1.27E-06	6.21E-06	0	0.00227	-1.95E-04

Table 51: Waste Production and Output Flows

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
HWD	kg	4.29E-09	1.64E-13	8.01E-13	0	1.57E-09	-1.06E-12
NHWD	kg	0.128	2.16E-06	1.05E-05	0	18.3	-1.22E-05
RWD	kg	5.25E-04	2.22E-09	1.08E-08	0	1.48E-04	-7.63E-09
CRU	kg	0	0	0	0	0	0
MER	kg	0.181	0	0	0	0	0
MFR	kg	2.06	0	0	0	0	0
EEE	MJ	0	0	0	0	0.0412	0
EET	MJ	0	0	0	0	0	0

Table 52: EN15804+A2 Additional Environmental Impact Indicators

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
GWP-GHG	kg CO ₂ -eq	4.64	0.0114	0.0553	0	3.22	-0.00152
PM	Disease incidences	4.56E-07	6.14E-10	2.61E-09	0	4.97E-08	-3.81E-11
IR	kBq U235 eq.	0.0451	2.87E-07	1.40E-06	0	0.0147	-8.76E-07
ETP-fw	CTUe	163	0.0380	0.185	0	12.6	-0.184
HTP-c	CTUh	3.26E-08	6.38E-13	3.17E-12	0	9.95E-10	-8.90E-13
HTP-nc	CTUh	3.79E-08	3.99E-11	1.70E-10	0	9.76E-08	-4.12E-12
SQP	Dimensionless	62.9	3.48E-04	0.00169	0	1.55	-0.00944

Table 53: Biogenic Carbon Content

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
BCC-prod	kg C	7.97	0	0	0	0	0
BCC-pack	kg C	0.289	0	0	0	0	0

Note: 1 kg biogenic carbon is equivalent to 44/12 kg CO₂

Table 54: EN15804+A1 Environmental Impact Indicators

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
GWP	kg CO ₂ -eq.	-25.6	0.0113	0.0545	0	31.9	-0.00148
ODP	kg CFC-11 eq.	4.10E-12	1.07E-15	5.20E-15	0	3.28E-12	-3.13E-15
AP	kg SO ₂ eq.	0.0262	3.77E-05	2.99E-04	0	0.00503	-3.96E-06
EP	kg PO ₄ ³⁻ eq.	0.00494	8.79E-06	7.53E-05	0	6.03E-04	-7.50E-07
POCP	kg C ₂ H ₄ eq.	0.0592	3.72E-06	-1.40E-04	0	5.29E-04	-2.39E-07
ADPE	kg Sb eq.	1.16E-06	1.39E-10	6.79E-10	0	1.72E-07	-2.93E-10
ADPF	MJ	42.9	0.151	0.738	0	23.9	-0.0147

Results for 1 m² of S-P-09355-08 Superfine® Standard 35mm particleboard

Table 55: EN15804+A2 Core Environmental Impact Indicators

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
GWP-total	kg CO ₂ -eq.	-27.6	0.0131	0.0635	0	36.9	-0.00173
GWP-fossil	kg CO ₂ eq.	5.59	0.0131	0.0634	0	2.08	-0.00171
GWP-biogenic	kg CO ₂ -eq.	-33.2	1.87E-06	5.69E-05	0	34.8	-1.59E-05
GWP-luluc	kg CO ₂ eq.	5.71E-04	9.50E-08	4.63E-07	0	8.26E-04	-4.37E-07
ODP	kg CFC 11 eq.	4.15E-12	1.04E-15	5.07E-15	0	3.18E-12	-3.03E-15
AP	mol H ⁺ eq.	0.0467	6.23E-05	5.06E-04	0	0.00727	-6.40E-06
EP-freshwater	kg P eq.	8.14E-06	2.30E-09	1.12E-08	0	1.43E-06	-6.49E-09
EP-marine	kg N eq.	0.0126	3.01E-05	2.57E-04	0	0.00198	-1.83E-06
EP-terrestrial	mol N eq.	0.167	3.30E-04	0.00282	0	0.0217	-2.53E-05
POCP	kg NMVOC eq.	0.0853	8.43E-05	4.76E-04	0	0.00609	-4.64E-06
ADP-m&m	kg Sb eq.	1.43E-06	1.60E-10	7.79E-10	0	1.95E-07	-3.34E-10
ADP-fossil	MJ	81.5	0.174	0.847	0	27.7	-0.0169
WDP	m ³ world eq. deprived	3.65	9.72E-05	4.74E-04	0	-0.0239	-0.00272

Table 56: Use of Resources

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
PERE	MJ	70.0	8.08E-04	0.00394	0	3.33	-0.0864
PERM	MJ	357	0	0	0	0	0
PERT	MJ	427	8.08E-04	0.00394	0	3.33	-0.0864
PENRE	MJ	63.8	0.174	0.847	0	27.7	-0.0169
PENRM	MJ	17.8	0	0	0	0	0
PENRT	MJ	81.6	0.174	0.847	0	27.7	-0.0169
SM	kg	0	0	0	0	0	0
RSF	MJ	3.32E-26	0	0	0	0	0
NRSF	MJ	3.90E-25	0	0	0	0	0
FWT	m ³	0.309	1.46E-06	7.13E-06	0	0.00260	-2.22E-04

Table 57: Waste Production and Output Flows

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
HWD	kg	5.26E-09	1.88E-13	9.19E-13	0	1.79E-09	-1.20E-12
NHWD	kg	0.148	2.48E-06	1.21E-05	0	21.0	-1.39E-05
RWD	kg	6.68E-04	2.55E-09	1.24E-08	0	1.69E-04	-8.68E-09
CRU	kg	0	0	0	0	0	0
MER	kg	0.208	0	0	0	0	0
MFR	kg	2.27	0	0	0	0	0
EEE	MJ	0	0	0	0	0.0469	0
EET	MJ	0	0	0	0	0	0

Table 58: EN15804+A2 Additional Environmental Impact Indicators

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
GWP-GHG	kg CO ₂ -eq	5.61	0.0131	0.0634	0	3.66	-0.00173
PM	Disease incidences	5.73E-07	7.05E-10	3.00E-09	0	5.67E-08	-4.33E-11
IR	kBq U235 eq.	0.0573	3.30E-07	1.61E-06	0	0.0168	-9.97E-07
ETP-fw	CTUe	190	0.0437	0.213	0	14.3	-0.210
HTP-c	CTUh	4.14E-08	7.33E-13	3.64E-12	0	1.14E-09	-1.01E-12
HTP-nc	CTUh	4.44E-08	4.58E-11	1.95E-10	0	1.11E-07	-4.69E-12
SQP	Dimensionless	70.8	3.99E-04	0.00195	0	1.77	-0.0107

Table 59: Biogenic Carbon Content

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
BCC-prod	kg C	9.06	0	0	0	0	0
BCC-pack	kg C	0.351	0	0	0	0	0

Note: 1 kg biogenic carbon is equivalent to 44/12 kg CO₂

Table 60: EN15804+A1 Environmental Impact Indicators

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
GWP	kg CO ₂ -eq.	-28.8	0.0129	0.0626	0	36.3	-0.00169
ODP	kg CFC-11 eq.	4.91E-12	1.22E-15	5.97E-15	0	3.74E-12	-3.56E-15
AP	kg SO ₂ eq.	0.0328	4.33E-05	3.43E-04	0	0.00574	-4.51E-06
EP	kg PO ₄ ³⁻ eq.	0.00619	1.01E-05	8.64E-05	0	6.88E-04	-8.54E-07
POCP	kg C ₂ H ₄ eq.	0.0673	4.27E-06	-1.61E-04	0	6.03E-04	-2.72E-07
ADPE	kg Sb eq.	1.43E-06	1.60E-10	7.79E-10	0	1.96E-07	-3.33E-10
ADPF	MJ	52.0	0.174	0.847	0	27.2	-0.0168

Results for 1 m² of S-P-09355-09 Superfine® MR 9mm particleboard

Table 61: EN15804+A2 Core Environmental Impact Indicators

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
GWP-total	kg CO ₂ -eq.	-7.21	0.00365	0.0177	0	9.82	-4.60E-04
GWP-fossil	kg CO ₂ eq.	1.64	0.00365	0.0177	0	0.559	-4.55E-04
GWP-biogenic	kg CO ₂ -eq.	-8.85	5.20E-07	1.58E-05	0	9.27	-4.23E-06
GWP-luluc	kg CO ₂ eq.	1.59E-04	2.65E-08	1.29E-07	0	2.27E-04	-1.16E-07
ODP	kg CFC 11 eq.	1.15E-12	2.90E-16	1.41E-15	0	8.55E-13	-8.06E-16
AP	mol H ⁺ eq.	0.0141	1.74E-05	1.41E-04	0	0.00196	-1.71E-06
EP-freshwater	kg P eq.	2.43E-06	6.41E-10	3.12E-09	0	3.89E-07	-1.73E-09
EP-marine	kg N eq.	0.00384	8.39E-06	7.16E-05	0	5.34E-04	-4.86E-07
EP-terrestrial	mol N eq.	0.0492	9.19E-05	7.86E-04	0	0.00586	-6.74E-06
POCP	kg NMVOC eq.	0.0268	2.35E-05	1.33E-04	0	0.00164	-1.24E-06
ADP-m&m	kg Sb eq.	3.79E-07	4.45E-11	2.17E-10	0	5.24E-08	-8.89E-11
ADP-fossil	MJ	24.3	0.0484	0.236	0	7.42	-0.00450
WDP	m ³ world eq. deprived	1.04	2.71E-05	1.32E-04	0	-0.00595	-7.24E-04

Table 62: Use of Resources

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
PERE	MJ	20.1	2.25E-04	0.00110	0	0.893	-0.0230
PERM	MJ	98.2	0	0	0	0	0
PERT	MJ	118	2.25E-04	0.00110	0	0.893	-0.0230
PENRE	MJ	14.8	0.0484	0.236	0	7.42	-0.00450
PENRM	MJ	9.48	0	0	0	0	0
PENRT	MJ	24.3	0.0484	0.236	0	7.42	-0.00450
SM	kg	0	0	0	0	0	0
RSF	MJ	9.12E-27	0	0	0	0	0
NRSF	MJ	1.07E-25	0	0	0	0	0
FWT	m ³	0.0886	4.07E-07	1.99E-06	0	7.04E-04	-5.91E-05

Table 63: Waste Production and Output Flows

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
HWD	kg	1.43E-09	5.25E-14	2.56E-13	0	4.79E-10	-3.21E-13
NHWD	kg	0.0421	6.91E-07	3.37E-06	0	5.85	-3.69E-06
RWD	kg	1.68E-04	7.09E-10	3.46E-09	0	4.55E-05	-2.31E-09
CRU	kg	0	0	0	0	0	0
MER	kg	0.0595	0	0	0	0	0
MFR	kg	1.18	0	0	0	0	0
EEE	MJ	0	0	0	0	0.0125	0
EET	MJ	0	0	0	0	0	0

Table 64: EN15804+A2 Additional Environmental Impact Indicators

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
GWP-GHG	kg CO ₂ -eq	1.64	0.00365	0.0177	0	0.980	-4.60E-04
PM	Disease incidences	1.81E-07	1.96E-10	8.36E-10	0	1.54E-08	-1.15E-11
IR	kBq U235 eq.	0.0145	9.19E-08	4.48E-07	0	0.00454	-2.66E-07
ETP-fw	CTUe	54.8	0.0122	0.0593	0	3.84	-0.0558
HTP-c	CTUh	1.01E-08	2.04E-13	1.01E-12	0	3.07E-10	-2.70E-13
HTP-nc	CTUh	1.35E-08	1.28E-11	5.43E-11	0	3.01E-08	-1.25E-12
SQP	Dimensionless	21.4	1.11E-04	5.42E-04	0	0.482	-0.00286

Table 65: Biogenic Carbon Content

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
BCC-prod	kg C	2.41	0	0	0	0	0
BCC-pack	kg C	0.174	0	0	0	0	0

Note: 1 kg biogenic carbon is equivalent to 44/12 kg CO₂

Table 66: EN15804+A1 Environmental Impact Indicators

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
GWP	kg CO ₂ -eq.	-7.57	0.00360	0.0174	0	9.66	-4.50E-04
ODP	kg CFC-11 eq.	1.36E-12	3.41E-16	1.66E-15	0	1.01E-12	-9.49E-16
AP	kg SO ₂ eq.	0.0101	1.21E-05	9.55E-05	0	0.00155	-1.20E-06
EP	kg PO ₄ ³⁻ eq.	0.00178	2.81E-06	2.41E-05	0	1.86E-04	-2.27E-07
POCP	kg C ₂ H ₄ eq.	0.0210	1.19E-06	-4.48E-05	0	1.62E-04	-7.25E-08
ADPE	kg Sb eq.	3.80E-07	4.45E-11	2.17E-10	0	5.27E-08	-8.88E-11
ADPF	MJ	16.9	0.0484	0.236	0	7.28	-0.00447

Results for 1 m² of S-P-09355-10 Superfine® MR 12mm particleboard

Table 67: EN15804+A2 Core Environmental Impact Indicators

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
GWP-total	kg CO ₂ -eq.	-9.71	0.00487	0.0236	0	13.1	-6.13E-04
GWP-fossil	kg CO ₂ eq.	2.09	0.00487	0.0235	0	0.745	-6.07E-04
GWP-biogenic	kg CO ₂ -eq.	-11.8	6.94E-07	2.11E-05	0	12.4	-5.64E-06
GWP-luluc	kg CO ₂ eq.	2.04E-04	3.53E-08	1.72E-07	0	3.03E-04	-1.55E-07
ODP	kg CFC 11 eq.	1.48E-12	3.86E-16	1.88E-15	0	1.14E-12	-1.07E-15
AP	mol H ⁺ eq.	0.0181	2.31E-05	1.88E-04	0	0.00262	-2.27E-06
EP-freshwater	kg P eq.	3.13E-06	8.54E-10	4.16E-09	0	5.18E-07	-2.30E-09
EP-marine	kg N eq.	0.00491	1.12E-05	9.55E-05	0	7.12E-04	-6.49E-07
EP-terrestrial	mol N eq.	0.0629	1.22E-04	0.00105	0	0.00782	-8.99E-06
POCP	kg NMVOC eq.	0.0341	3.13E-05	1.77E-04	0	0.00219	-1.65E-06
ADP-m&m	kg Sb eq.	4.84E-07	5.94E-11	2.89E-10	0	6.99E-08	-1.19E-10
ADP-fossil	MJ	31.0	0.0645	0.315	0	9.89	-0.00599
WDP	m ³ world eq. deprived	1.35	3.61E-05	1.76E-04	0	-0.00794	-9.66E-04

Table 68: Use of Resources

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
PERE	MJ	25.9	3.00E-04	0.00146	0	1.19	-0.0307
PERM	MJ	127	0	0	0	0	0
PERT	MJ	152	3.00E-04	0.00146	0	1.19	-0.0307
PENRE	MJ	18.6	0.0645	0.315	0	9.90	-0.00600
PENRM	MJ	12.5	0	0	0	0	0
PENRT	MJ	31.1	0.0645	0.315	0	9.90	-0.00600
SM	kg	0	0	0	0	0	0
RSF	MJ	1.18E-26	0	0	0	0	0
NRSF	MJ	1.38E-25	0	0	0	0	0
FWT	m ³	0.114	5.43E-07	2.65E-06	0	9.39E-04	-7.88E-05

Table 69: Waste Production and Output Flows

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
HWD	kg	1.82E-09	7.00E-14	3.41E-13	0	6.39E-10	-4.27E-13
NHWD	kg	0.0542	9.22E-07	4.49E-06	0	7.81	-4.92E-06
RWD	kg	2.13E-04	9.46E-10	4.61E-09	0	6.06E-05	-3.08E-09
CRU	kg	0	0	0	0	0	0
MER	kg	0.0769	0	0	0	0	0
MFR	kg	1.31	0	0	0	0	0
EEE	MJ	0	0	0	0	0.0166	0
EET	MJ	0	0	0	0	0	0

Table 70: EN15804+A2 Additional Environmental Impact Indicators

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
GWP-GHG	kg CO ₂ -eq	2.10	0.00487	0.0236	0	1.31	-6.13E-04
PM	Disease incidences	2.31E-07	2.62E-10	1.11E-09	0	2.06E-08	-1.54E-11
IR	kBq U235 eq.	0.0184	1.22E-07	5.97E-07	0	0.00606	-3.54E-07
ETP-fw	CTUe	70.6	0.0162	0.0790	0	5.12	-0.0744
HTP-c	CTUh	1.28E-08	2.72E-13	1.35E-12	0	4.09E-10	-3.60E-13
HTP-nc	CTUh	1.72E-08	1.70E-11	7.24E-11	0	4.02E-08	-1.67E-12
SQP	Dimensionless	27.2	1.48E-04	7.22E-04	0	0.642	-0.00382

Table 71: Biogenic Carbon Content

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
BCC-prod	kg C	3.22	0	0	0	0	0
BCC-pack	kg C	0.116	0	0	0	0	0

Note: 1 kg biogenic carbon is equivalent to 44/12 kg CO₂

Table 72: EN15804+A1 Environmental Impact Indicators

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
GWP	kg CO ₂ -eq.	-10.2	0.00480	0.0232	0	12.9	-6.00E-04
ODP	kg CFC-11 eq.	1.75E-12	4.55E-16	2.22E-15	0	1.34E-12	-1.27E-15
AP	kg SO ₂ eq.	0.0130	1.61E-05	1.27E-04	0	0.00207	-1.60E-06
EP	kg PO ₄ ³⁻ eq.	0.00227	3.75E-06	3.21E-05	0	2.48E-04	-3.03E-07
POCP	kg C ₂ H ₄ eq.	0.0265	1.59E-06	-5.97E-05	0	2.17E-04	-9.67E-08
ADPE	kg Sb eq.	4.85E-07	5.94E-11	2.89E-10	0	7.03E-08	-1.18E-10
ADPF	MJ	21.6	0.0645	0.315	0	9.71	-0.00596

Results for 1 m² of S-P-09355-11 Superfine® MR 16mm particleboard

Table 73: EN15804+A2 Core Environmental Impact Indicators

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
GWP-total	kg CO ₂ -eq.	-13.0	0.00649	0.0314	0	17.4	-8.15E-04
GWP-fossil	kg CO ₂ eq.	2.73	0.00649	0.0314	0	0.992	-8.08E-04
GWP-biogenic	kg CO ₂ -eq.	-15.7	9.25E-07	2.82E-05	0	16.4	-7.50E-06
GWP-luluc	kg CO ₂ eq.	2.70E-04	4.71E-08	2.29E-07	0	4.03E-04	-2.06E-07
ODP	kg CFC 11 eq.	1.95E-12	5.15E-16	2.51E-15	0	1.52E-12	-1.43E-15
AP	mol H ⁺ eq.	0.0236	3.09E-05	2.50E-04	0	0.00349	-3.03E-06
EP-freshwater	kg P eq.	4.11E-06	1.14E-09	5.55E-09	0	6.90E-07	-3.06E-09
EP-marine	kg N eq.	0.00641	1.49E-05	1.27E-04	0	9.48E-04	-8.63E-07
EP-terrestrial	mol N eq.	0.0822	1.63E-04	0.00140	0	0.0104	-1.20E-05
POCP	kg NMVOC eq.	0.0440	4.18E-05	2.36E-04	0	0.00292	-2.19E-06
ADP-m&m	kg Sb eq.	6.38E-07	7.91E-11	3.86E-10	0	9.30E-08	-1.58E-10
ADP-fossil	MJ	40.4	0.0861	0.420	0	13.2	-0.00797
WDP	m ³ world eq. deprived	1.79	4.81E-05	2.35E-04	0	-0.0105	-0.00128

Table 74: Use of Resources

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
PERE	MJ	34.5	4.00E-04	0.00195	0	1.59	-0.0408
PERM	MJ	168	0	0	0	0	0
PERT	MJ	203	4.00E-04	0.00195	0	1.59	-0.0408
PENRE	MJ	23.6	0.0861	0.420	0	13.2	-0.00798
PENRM	MJ	16.8	0	0	0	0	0
PENRT	MJ	40.4	0.0861	0.420	0	13.2	-0.00798
SM	kg	0	0	0	0	0	0
RSF	MJ	1.56E-26	0	0	0	0	0
NRSF	MJ	1.84E-25	0	0	0	0	0
FWT	m ³	0.152	7.24E-07	3.53E-06	0	0.00125	-1.05E-04

Table 75: Waste Production and Output Flows

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
HWD	kg	2.38E-09	9.34E-14	4.55E-13	0	8.50E-10	-5.69E-13
NHWD	kg	0.0721	1.23E-06	5.99E-06	0	10.4	-6.55E-06
RWD	kg	2.78E-04	1.26E-09	6.15E-09	0	8.07E-05	-4.10E-09
CRU	kg	0	0	0	0	0	0
MER	kg	0.103	0	0	0	0	0
MFR	kg	1.26	0	0	0	0	0
EEE	MJ	0	0	0	0	0.0221	0
EET	MJ	0	0	0	0	0	0

Table 76: EN15804+A2 Additional Environmental Impact Indicators

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
GWP-GHG	kg CO ₂ -eq	2.74	0.00649	0.0314	0	1.74	-8.16E-04
PM	Disease incidences	3.02E-07	3.49E-10	1.49E-09	0	2.74E-08	-2.05E-11
IR	kBq U235 eq.	0.0241	1.63E-07	7.96E-07	0	0.00806	-4.71E-07
ETP-fw	CTUe	93.6	0.0216	0.105	0	6.81	-0.0990
HTP-c	CTUh	1.67E-08	3.63E-13	1.80E-12	0	5.44E-10	-4.78E-13
HTP-nc	CTUh	2.24E-08	2.27E-11	9.66E-11	0	5.35E-08	-2.22E-12
SQP	Dimensionless	35.3	1.98E-04	9.63E-04	0	0.855	-0.00508

Table 77: Biogenic Carbon Content

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
BCC-prod	kg C	4.28	0	0	0	0	0
BCC-pack	kg C	0.154	0	0	0	0	0

Note: 1 kg biogenic carbon is equivalent to 44/12 kg CO₂

Table 78: EN15804+A1 Environmental Impact Indicators

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
GWP	kg CO ₂ -eq.	-13.6	0.00640	0.0310	0	17.1	-7.98E-04
ODP	kg CFC-11 eq.	2.31E-12	6.06E-16	2.96E-15	0	1.79E-12	-1.68E-15
AP	kg SO ₂ eq.	0.0169	2.14E-05	1.70E-04	0	0.00275	-2.13E-06
EP	kg PO ₄ ³⁻ eq.	0.00297	4.99E-06	4.28E-05	0	3.30E-04	-4.03E-07
POCP	kg C ₂ H ₄ eq.	0.0341	2.12E-06	-7.96E-05	0	2.88E-04	-1.29E-07
ADPE	kg Sb eq.	6.40E-07	7.92E-11	3.86E-10	0	9.35E-08	-1.58E-10
ADPF	MJ	28.1	0.0860	0.419	0	12.9	-0.00793

Results for 1 m² of S-P-09355-12 Superfine® MR 18mm particleboard

Table 79: EN15804+A2 Core Environmental Impact Indicators

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
GWP-total	kg CO ₂ -eq.	-14.7	0.00731	0.0354	0	19.7	-9.20E-04
GWP-fossil	kg CO ₂ eq.	3.02	0.00731	0.0353	0	1.12	-9.11E-04
GWP-biogenic	kg CO ₂ -eq.	-17.7	1.04E-06	3.17E-05	0	18.5	-8.46E-06
GWP-luluc	kg CO ₂ eq.	3.01E-04	5.29E-08	2.58E-07	0	4.54E-04	-2.33E-07
ODP	kg CFC 11 eq.	2.17E-12	5.79E-16	2.82E-15	0	1.71E-12	-1.61E-15
AP	mol H ⁺ eq.	0.0259	3.47E-05	2.82E-04	0	0.00393	-3.41E-06
EP-freshwater	kg P eq.	4.59E-06	1.28E-09	6.25E-09	0	7.77E-07	-3.46E-09
EP-marine	kg N eq.	0.00705	1.68E-05	1.43E-04	0	0.00107	-9.73E-07
EP-terrestrial	mol N eq.	0.0904	1.84E-04	0.00157	0	0.0117	-1.35E-05
POCP	kg NMVOC eq.	0.0489	4.70E-05	2.65E-04	0	0.00329	-2.47E-06
ADP-m&m	kg Sb eq.	7.04E-07	8.90E-11	4.34E-10	0	1.05E-07	-1.78E-10
ADP-fossil	MJ	44.6	0.0968	0.472	0	14.8	-0.00899
WDP	m ³ world eq. deprived	2.01	5.41E-05	2.64E-04	0	-0.0119	-0.00145

Table 80: Use of Resources

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
PERE	MJ	38.7	4.50E-04	0.00219	0	1.79	-0.0460
PERM	MJ	190	0	0	0	0	0
PERT	MJ	229	4.50E-04	0.00219	0	1.79	-0.0460
PENRE	MJ	26.0	0.0968	0.472	0	14.9	-0.00900
PENRM	MJ	18.6	0	0	0	0	0
PENRT	MJ	44.6	0.0968	0.472	0	14.9	-0.00900
SM	kg	0	0	0	0	0	0
RSF	MJ	1.76E-26	0	0	0	0	0
NRSF	MJ	2.07E-25	0	0	0	0	0
FWT	m ³	0.171	8.15E-07	3.97E-06	0	0.00141	-1.18E-04

Table 81: Waste Production and Output Flows

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
HWD	kg	2.63E-09	1.05E-13	5.12E-13	0	9.59E-10	-6.41E-13
NHWD	kg	0.0809	1.38E-06	6.74E-06	0	11.7	-7.39E-06
RWD	kg	3.05E-04	1.42E-09	6.92E-09	0	9.10E-05	-4.63E-09
CRU	kg	0	0	0	0	0	0
MER	kg	0.115	0	0	0	0	0
MFR	kg	1.30	0	0	0	0	0
EEE	MJ	0	0	0	0	0.0250	0
EET	MJ	0	0	0	0	0	0

Table 82: EN15804+A2 Additional Environmental Impact Indicators

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
GWP-GHG	kg CO ₂ -eq	3.03	0.00731	0.0353	0	1.96	-9.20E-04
PM	Disease incidences	3.31E-07	3.93E-10	1.67E-09	0	3.09E-08	-2.31E-11
IR	kBq U235 eq.	0.0264	1.84E-07	8.96E-07	0	0.00908	-5.31E-07
ETP-fw	CTUe	105	0.0243	0.119	0	7.68	-0.112
HTP-c	CTUh	1.83E-08	4.08E-13	2.03E-12	0	6.13E-10	-5.39E-13
HTP-nc	CTUh	2.49E-08	2.55E-11	1.09E-10	0	6.03E-08	-2.50E-12
SQP	Dimensionless	39.5	2.22E-04	0.00108	0	0.964	-0.00573

Table 83: Biogenic Carbon Content

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
BCC-prod	kg C	4.83	0	0	0	0	0
BCC-pack	kg C	0.173	0	0	0	0	0

Note: 1 kg biogenic carbon is equivalent to 44/12 kg CO₂

Table 84: EN15804+A1 Environmental Impact Indicators

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
GWP	kg CO ₂ -eq.	-15.3	0.00720	0.0349	0	19.3	-9.00E-04
ODP	kg CFC-11 eq.	2.57E-12	6.82E-16	3.32E-15	0	2.01E-12	-1.90E-15
AP	kg SO ₂ eq.	0.0186	2.41E-05	1.91E-04	0	0.00310	-2.40E-06
EP	kg PO ₄ ³⁻ eq.	0.00326	5.62E-06	4.82E-05	0	3.71E-04	-4.55E-07
POCP	kg C ₂ H ₄ eq.	0.0381	2.38E-06	-8.96E-05	0	3.25E-04	-1.45E-07
ADPE	kg Sb eq.	7.06E-07	8.91E-11	4.34E-10	0	1.05E-07	-1.78E-10
ADPF	MJ	31.1	0.0968	0.472	0	14.6	-0.00894

Results for 1 m² of S-P-09355-13 Superfine® MR 25mm particleboard

Table 85: EN15804+A2 Core Environmental Impact Indicators

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
GWP-total	kg CO ₂ -eq.	-19.1	0.00984	0.0476	0	26.1	-0.00122
GWP-fossil	kg CO ₂ eq.	4.35	0.00983	0.0475	0	1.49	-0.00121
GWP-biogenic	kg CO ₂ -eq.	-23.5	1.40E-06	4.27E-05	0	24.6	-1.12E-05
GWP-luluc	kg CO ₂ eq.	4.24E-04	7.13E-08	3.47E-07	0	6.09E-04	-3.09E-07
ODP	kg CFC 11 eq.	3.07E-12	7.80E-16	3.80E-15	0	2.28E-12	-2.14E-15
AP	mol H ⁺ eq.	0.0388	4.67E-05	3.79E-04	0	0.00524	-4.53E-06
EP-freshwater	kg P eq.	6.40E-06	1.72E-09	8.41E-09	0	1.04E-06	-4.59E-09
EP-marine	kg N eq.	0.0105	2.26E-05	1.93E-04	0	0.00142	-1.29E-06
EP-terrestrial	mol N eq.	0.135	2.47E-04	0.00212	0	0.0156	-1.79E-05
POCP	kg NMVOC eq.	0.0689	6.33E-05	3.57E-04	0	0.00438	-3.28E-06
ADP-m&m	kg Sb eq.	1.04E-06	1.20E-10	5.84E-10	0	1.39E-07	-2.36E-10
ADP-fossil	MJ	65.3	0.130	0.635	0	19.7	-0.0119
WDP	m ³ world eq. deprived	2.74	7.29E-05	3.55E-04	0	-0.0154	-0.00192

Table 86: Use of Resources

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
PERE	MJ	52.3	6.06E-04	0.00295	0	2.38	-0.0611
PERM	MJ	252	0	0	0	0	0
PERT	MJ	305	6.06E-04	0.00295	0	2.38	-0.0611
PENRE	MJ	38.2	0.130	0.635	0	19.8	-0.0119
PENRM	MJ	27.1	0	0	0	0	0
PENRT	MJ	65.3	0.130	0.635	0	19.8	-0.0119
SM	kg	0	0	0	0	0	0
RSF	MJ	2.34E-26	0	0	0	0	0
NRSF	MJ	2.75E-25	0	0	0	0	0
FWT	m ³	0.231	1.10E-06	5.35E-06	0	0.00188	-1.57E-04

Table 87: Waste Production and Output Flows

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
HWD	kg	3.85E-09	1.41E-13	6.89E-13	0	1.27E-09	-8.51E-13
NHWD	kg	0.110	1.86E-06	9.08E-06	0	15.8	-9.80E-06
RWD	kg	4.65E-04	1.91E-09	9.31E-09	0	1.21E-04	-6.14E-09
CRU	kg	0	0	0	0	0	0
MER	kg	0.155	0	0	0	0	0
MFR	kg	1.95	0	0	0	0	0
EEE	MJ	0	0	0	0	0.0331	0
EET	MJ	0	0	0	0	0	0

Table 88: EN15804+A2 Additional Environmental Impact Indicators

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
GWP-GHG	kg CO ₂ -eq	4.37	0.00984	0.0476	0	2.60	-0.00122
PM	Disease incidences	4.99E-07	5.29E-10	2.25E-09	0	4.13E-08	-3.06E-11
IR	kBq U235 eq.	0.0402	2.47E-07	1.21E-06	0	0.0121	-7.05E-07
ETP-fw	CTUe	143	0.0327	0.160	0	10.2	-0.148
HTP-c	CTUh	2.79E-08	5.49E-13	2.73E-12	0	8.18E-10	-7.16E-13
HTP-nc	CTUh	3.50E-08	3.43E-11	1.46E-10	0	8.04E-08	-3.32E-12
SQP	Dimensionless	53.3	2.99E-04	0.00146	0	1.29	-0.00760

Table 89: Biogenic Carbon Content

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
BCC-prod	kg C	6.41	0	0	0	0	0
BCC-pack	kg C	0.240	0	0	0	0	0

Note: 1 kg biogenic carbon is equivalent to 44/12 kg CO₂

Table 90: EN15804+A1 Environmental Impact Indicators

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
GWP	kg CO ₂ -eq.	-20.1	0.00969	0.0469	0	25.7	-0.00119
ODP	kg CFC-11 eq.	3.62E-12	9.18E-16	4.48E-15	0	2.68E-12	-2.52E-15
AP	kg SO ₂ eq.	0.0278	3.25E-05	2.57E-04	0	0.00413	-3.19E-06
EP	kg PO ₄ ³⁻ eq.	0.00488	7.56E-06	6.48E-05	0	4.95E-04	-6.04E-07
POCP	kg C ₂ H ₄ eq.	0.0523	3.20E-06	-1.21E-04	0	4.33E-04	-1.92E-07
ADPE	kg Sb eq.	1.04E-06	1.20E-10	5.85E-10	0	1.40E-07	-2.36E-10
ADPF	MJ	44.8	0.130	0.635	0	19.4	-0.0119

Results for 1 m² of S-P-09355-14 Superfine® MR 30mm particleboard

Table 91: EN15804+A2 Core Environmental Impact Indicators

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
GWP-total	kg CO ₂ -eq.	-22.1	0.0114	0.0553	0	30.3	-0.00142
GWP-fossil	kg CO ₂ eq.	5.12	0.0114	0.0552	0	1.73	-0.00140
GWP-biogenic	kg CO ₂ -eq.	-27.2	1.63E-06	4.96E-05	0	28.5	-1.30E-05
GWP-luluc	kg CO ₂ eq.	5.01E-04	8.28E-08	4.04E-07	0	7.07E-04	-3.58E-07
ODP	kg CFC 11 eq.	3.62E-12	9.06E-16	4.42E-15	0	2.64E-12	-2.48E-15
AP	mol H ⁺ eq.	0.0456	5.43E-05	4.41E-04	0	0.00608	-5.25E-06
EP-freshwater	kg P eq.	7.54E-06	2.00E-09	9.77E-09	0	1.20E-06	-5.32E-09
EP-marine	kg N eq.	0.0124	2.62E-05	2.24E-04	0	0.00165	-1.50E-06
EP-terrestrial	mol N eq.	0.159	2.87E-04	0.00246	0	0.0181	-2.08E-05
POCP	kg NMVOC eq.	0.0808	7.35E-05	4.15E-04	0	0.00509	-3.80E-06
ADP-m&m	kg Sb eq.	1.22E-06	1.39E-10	6.79E-10	0	1.62E-07	-2.74E-10
ADP-fossil	MJ	76.6	0.151	0.738	0	22.9	-0.0138
WDP	m ³ world eq. deprived	3.24	8.47E-05	4.13E-04	0	-0.0179	-0.00223

Table 92: Use of Resources

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
PERE	MJ	61.8	7.04E-04	0.00343	0	2.76	-0.0708
PERM	MJ	298	0	0	0	0	0
PERT	MJ	360	7.04E-04	0.00343	0	2.76	-0.0708
PENRE	MJ	44.8	0.151	0.738	0	22.9	-0.0138
PENRM	MJ	32.0	0	0	0	0	0
PENRT	MJ	76.7	0.151	0.738	0	22.9	-0.0138
SM	kg	0	0	0	0	0	0
RSF	MJ	2.77E-26	0	0	0	0	0
NRSF	MJ	3.26E-25	0	0	0	0	0
FWT	m ³	0.274	1.27E-06	6.21E-06	0	0.00218	-1.82E-04

Table 93: Waste Production and Output Flows

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
HWD	kg	4.54E-09	1.64E-13	8.01E-13	0	1.48E-09	-9.87E-13
NHWD	kg	0.130	2.16E-06	1.05E-05	0	18.3	-1.14E-05
RWD	kg	5.48E-04	2.22E-09	1.08E-08	0	1.41E-04	-7.12E-09
CRU	kg	0	0	0	0	0	0
MER	kg	0.184	0	0	0	0	0
MFR	kg	2.07	0	0	0	0	0
EEE	MJ	0	0	0	0	0.0384	0
EET	MJ	0	0	0	0	0	0

Table 94: EN15804+A2 Additional Environmental Impact Indicators

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
GWP-GHG	kg CO ₂ -eq	5.14	0.0114	0.0553	0	3.02	-0.00142
PM	Disease incidences	5.86E-07	6.14E-10	2.61E-09	0	4.79E-08	-3.55E-11
IR	kBq U235 eq.	0.0474	2.87E-07	1.40E-06	0	0.0141	-8.18E-07
ETP-fw	CTUe	169	0.0380	0.185	0	11.8	-0.172
HTP-c	CTUh	3.29E-08	6.38E-13	3.17E-12	0	9.49E-10	-8.30E-13
HTP-nc	CTUh	4.11E-08	3.99E-11	1.70E-10	0	9.33E-08	-3.85E-12
SQP	Dimensionless	62.5	3.48E-04	0.00169	0	1.49	-0.00881

Table 95: Biogenic Carbon Content

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
BCC-prod	kg C	7.44	0	0	0	0	0
BCC-pack	kg C	0.431	0	0	0	0	0

Note: 1 kg biogenic carbon is equivalent to 44/12 kg CO₂

Table 96: EN15804+A1 Environmental Impact Indicators

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
GWP	kg CO ₂ -eq.	-23.2	0.0113	0.0545	0	29.8	-0.00139
ODP	kg CFC-11 eq.	4.28E-12	1.07E-15	5.20E-15	0	3.11E-12	-2.92E-15
AP	kg SO ₂ eq.	0.0327	3.77E-05	2.99E-04	0	0.00480	-3.70E-06
EP	kg PO ₄ ³⁻ eq.	0.00575	8.79E-06	7.53E-05	0	5.74E-04	-7.00E-07
POCP	kg C ₂ H ₄ eq.	0.0612	3.72E-06	-1.40E-04	0	5.02E-04	-2.23E-07
ADPE	kg Sb eq.	1.23E-06	1.39E-10	6.79E-10	0	1.63E-07	-2.74E-10
ADPF	MJ	52.5	0.151	0.738	0	22.5	-0.0138

Results for 1 m² of S-P-09355-15 Superfine® MR 35mm particleboard

Table 97: EN15804+A2 Core Environmental Impact Indicators

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
GWP-total	kg CO ₂ -eq.	-25.5	0.0131	0.0635	0	34.7	-0.00162
GWP-fossil	kg CO ₂ eq.	5.76	0.0131	0.0634	0	1.98	-0.00161
GWP-biogenic	kg CO ₂ -eq.	-31.3	1.87E-06	5.69E-05	0	32.7	-1.49E-05
GWP-luluc	kg CO ₂ eq.	5.67E-04	9.50E-08	4.63E-07	0	8.11E-04	-4.11E-07
ODP	kg CFC 11 eq.	4.09E-12	1.04E-15	5.07E-15	0	3.03E-12	-2.85E-15
AP	mol H ⁺ eq.	0.0512	6.23E-05	5.06E-04	0	0.00697	-6.03E-06
EP-freshwater	kg P eq.	8.53E-06	2.30E-09	1.12E-08	0	1.38E-06	-6.10E-09
EP-marine	kg N eq.	0.0139	3.01E-05	2.57E-04	0	0.00190	-1.72E-06
EP-terrestrial	mol N eq.	0.179	3.30E-04	0.00282	0	0.0208	-2.38E-05
POCP	kg NMVOC eq.	0.0904	8.43E-05	4.76E-04	0	0.00584	-4.36E-06
ADP-m&m	kg Sb eq.	1.38E-06	1.60E-10	7.79E-10	0	1.86E-07	-3.14E-10
ADP-fossil	MJ	86.1	0.174	0.847	0	26.3	-0.0159
WDP	m ³ world eq. deprived	3.69	9.72E-05	4.74E-04	0	-0.0205	-0.00256

Table 98: Use of Resources

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
PERE	MJ	70.4	8.08E-04	0.00394	0	3.17	-0.0813
PERM	MJ	340	0	0	0	0	0
PERT	MJ	410	8.08E-04	0.00394	0	3.17	-0.0813
PENRE	MJ	49.5	0.174	0.847	0	26.3	-0.0159
PENRM	MJ	36.7	0	0	0	0	0
PENRT	MJ	86.2	0.174	0.847	0	26.3	-0.0159
SM	kg	0	0	0	0	0	0
RSF	MJ	3.16E-26	0	0	0	0	0
NRSF	MJ	3.71E-25	0	0	0	0	0
FWT	m ³	0.312	1.46E-06	7.13E-06	0	0.00250	-2.09E-04

Table 99: Waste Production and Output Flows

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
HWD	kg	5.10E-09	1.88E-13	9.19E-13	0	1.70E-09	-1.13E-12
NHWD	kg	0.148	2.48E-06	1.21E-05	0	21.0	-1.30E-05
RWD	kg	6.14E-04	2.55E-09	1.24E-08	0	1.61E-04	-8.17E-09
CRU	kg	0	0	0	0	0	0
MER	kg	0.210	0	0	0	0	0
MFR	kg	2.27	0	0	0	0	0
EEE	MJ	0	0	0	0	0.0441	0
EET	MJ	0	0	0	0	0	0

Table 100: EN15804+A2 Additional Environmental Impact Indicators

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
GWP-GHG	kg CO ₂ -eq	5.78	0.0131	0.0634	0	3.47	-0.00163
PM	Disease incidences	6.58E-07	7.05E-10	3.00E-09	0	5.50E-08	-4.07E-11
IR	kBq U235 eq.	0.0531	3.30E-07	1.61E-06	0	0.0161	-9.38E-07
ETP-fw	CTUe	192	0.0437	0.213	0	13.6	-0.197
HTP-c	CTUh	3.69E-08	7.33E-13	3.64E-12	0	1.09E-09	-9.53E-13
HTP-nc	CTUh	4.62E-08	4.58E-11	1.95E-10	0	1.07E-07	-4.41E-12
SQP	Dimensionless	70.2	3.99E-04	0.00195	0	1.72	-0.0101

Table 101: Biogenic Carbon Content

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
BCC-prod	kg C	8.53	0	0	0	0	0
BCC-pack	kg C	0.432	0	0	0	0	0

Note: 1 kg biogenic carbon is equivalent to 44/12 kg CO₂

Table 102: EN15804+A1 Environmental Impact Indicators

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
GWP	kg CO ₂ -eq.	-26.7	0.0129	0.0626	0	34.1	-0.00159
ODP	kg CFC-11 eq.	4.84E-12	1.22E-15	5.97E-15	0	3.57E-12	-3.35E-15
AP	kg SO ₂ eq.	0.0367	4.33E-05	3.43E-04	0	0.00550	-4.24E-06
EP	kg PO ₄ ³⁻ eq.	0.00645	1.01E-05	8.64E-05	0	6.59E-04	-8.03E-07
POCP	kg C ₂ H ₄ eq.	0.0684	4.27E-06	-1.61E-04	0	5.76E-04	-2.56E-07
ADPE	kg Sb eq.	1.38E-06	1.60E-10	7.79E-10	0	1.87E-07	-3.14E-10
ADPF	MJ	59.1	0.174	0.847	0	25.8	-0.0158

Results for Additional Scenarios

Alternative results are declared below for GWP-biogenic, GWP-total, and GWP-GHG. These results use a method that allows consideration of permanent (more than 100 years) storage of biogenic carbon in the product when in landfill. The current methodology of EN 15804 does not allow consideration of permanent storage (in case of such storage, a virtual emission of biogenic CO₂ is added). The PCR allows declaration of these alternative results.

Table 103: EN15804+A2 EPD Results for 1m² of Superfine® Standard 9mm - Scenario analysis - Sequestration at Landfill

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
GWP-total	kg CO ₂ -eq.	-7.66	0.00365	0.0177	0	1.02	-4.83E-04
GWP-biogenic	kg CO ₂ -eq.	-9.30	5.20E-07	1.58E-05	0	0.434	-4.44E-06
GWP-GHG	kg CO ₂ -eq.	1.65	0.00365	0.0177	0	1.03	-4.84E-04

Table 104: EN15804+A2 EPD Results for 1m² of Superfine® Standard 12mm - Scenario analysis - Sequestration at Landfill

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
GWP-total	kg CO ₂ -eq.	-10.3	0.00487	0.0236	0	1.36	-6.45E-04
GWP-biogenic	kg CO ₂ -eq.	-12.4	6.94E-07	2.11E-05	0	0.579	-5.93E-06
GWP-GHG	kg CO ₂ -eq.	2.11	0.00487	0.0236	0	1.37	-6.45E-04

Table 105: EN15804+A2 EPD Results for 1m² of Superfine® Standard 16mm - Scenario analysis - Sequestration at Landfill

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
GWP-total	kg CO ₂ -eq.	-14.1	0.00649	0.0314	0	1.82	-8.65E-04
GWP-biogenic	kg CO ₂ -eq.	-16.7	9.25E-07	2.82E-05	0	0.778	-7.96E-06
GWP-GHG	kg CO ₂ -eq.	2.56	0.00649	0.0314	0	1.84	-8.66E-04

Table 106: EN15804+A2 EPD Results for 1m² of Superfine® Standard 18mm - Scenario analysis - Sequestration at Landfill

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
GWP-total	kg CO ₂ -eq.	-15.9	0.00731	0.0354	0	2.05	-9.74E-04
GWP-biogenic	kg CO ₂ -eq.	-18.7	1.04E-06	3.17E-05	0	0.875	-8.96E-06
GWP-GHG	kg CO ₂ -eq.	2.87	0.00731	0.0353	0	2.07	-9.75E-04

Table 107: EN15804+A2 EPD Results for 1m² of Superfine® Standard 25mm - Scenario analysis - Sequestration at Landfill

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
GWP-total	kg CO ₂ -eq.	-20.5	0.00968	0.0468	0	2.70	-0.00128
GWP-biogenic	kg CO ₂ -eq.	-24.6	1.38E-06	4.20E-05	0	1.15	-1.18E-05
GWP-GHG	kg CO ₂ -eq.	4.12	0.00968	0.0468	0	2.72	-0.00128

Table 108: EN15804+A2 EPD Results for 1m² of Superfine® Standard 28.5mm - Scenario analysis - Sequestration at Landfill

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
GWP-total	kg CO ₂ -eq.	-23.4	0.0109	0.0525	0	3.03	-0.00144
GWP-biogenic	kg CO ₂ -eq.	-27.7	1.55E-06	4.71E-05	0	1.30	-1.33E-05
GWP-GHG	kg CO ₂ -eq.	4.40	0.0109	0.0525	0	3.06	-0.00144

Table 109: EN15804+A2 EPD Results for 1m² of Superfine® Standard 30mm - Scenario analysis - Sequestration at Landfill

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
GWP-total	kg CO ₂ -eq.	-24.6	0.0114	0.0553	0	3.19	-0.00152
GWP-biogenic	kg CO ₂ -eq.	-29.2	1.63E-06	4.96E-05	0	1.36	-1.40E-05
GWP-GHG	kg CO ₂ -eq.	4.64	0.0114	0.0553	0	3.22	-0.00152

Table 110: EN15804+A2 EPD Results for 1m² of Superfine® Standard 35mm - Scenario analysis - Sequestration at Landfill

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
GWP-total	kg CO ₂ -eq.	-27.6	0.0131	0.0635	0	3.64	-0.00173
GWP-biogenic	kg CO ₂ -eq.	-33.2	1.87E-06	5.69E-05	0	1.55	-1.59E-05
GWP-GHG	kg CO ₂ -eq.	5.61	0.0131	0.0634	0	3.66	-0.00173

Table 111: EN15804+A2 EPD Results for 1m² of Superfine® MR 9mm - Scenario analysis - Sequestration at Landfill

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
GWP-total	kg CO ₂ -eq.	-7.21	0.00365	0.0177	0	0.972	-4.60E-04
GWP-biogenic	kg CO ₂ -eq.	-8.85	5.20E-07	1.58E-05	0	0.413	-4.23E-06
GWP-GHG	kg CO ₂ -eq.	1.64	0.00365	0.0177	0	0.980	-4.60E-04

Table 112: EN15804+A2 EPD Results for 1m² of Superfine® MR 12mm - Scenario analysis - Sequestration at Landfill

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
GWP-total	kg CO ₂ -eq.	-9.71	0.00487	0.0236	0	1.30	-6.13E-04
GWP-biogenic	kg CO ₂ -eq.	-11.8	6.94E-07	2.11E-05	0	0.551	-5.64E-06
GWP-GHG	kg CO ₂ -eq.	2.10	0.00487	0.0236	0	1.31	-6.13E-04

Table 113: EN15804+A2 EPD Results for 1m² of Superfine® MR 16mm - Scenario analysis - Sequestration at Landfill

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
GWP-total	kg CO ₂ -eq.	-13.0	0.00649	0.0314	0	1.72	-8.15E-04
GWP-biogenic	kg CO ₂ -eq.	-15.7	9.25E-07	2.82E-05	0	0.733	-7.50E-06
GWP-GHG	kg CO ₂ -eq.	2.74	0.00649	0.0314	0	1.74	-8.16E-04

Table 114: EN15804+A2 EPD Results for 1m² of Superfine® MR 18mm - Scenario analysis - Sequestration at Landfill

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
GWP-total	kg CO ₂ -eq.	-14.7	0.00731	0.0354	0	1.95	-9.20E-04
GWP-biogenic	kg CO ₂ -eq.	-17.7	1.04E-06	3.17E-05	0	0.826	-8.46E-06
GWP-GHG	kg CO ₂ -eq.	3.03	0.00731	0.0353	0	1.96	-9.20E-04

Table 115: EN15804+A2 EPD Results for 1m² of Superfine® MR 25mm - Scenario analysis - Sequestration at Landfill

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
GWP-total	kg CO ₂ -eq.	-19.1	0.00984	0.0476	0	2.58	-0.00122
GWP-biogenic	kg CO ₂ -eq.	-23.5	1.40E-06	4.27E-05	0	1.10	-1.12E-05
GWP-GHG	kg CO ₂ -eq.	4.37	0.00984	0.0476	0	2.60	-0.00122

Table 116: EN15804+A2 EPD Results for 1m² of Superfine® MR 30mm - Scenario analysis - Sequestration at Landfill

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
GWP-total	kg CO ₂ -eq.	-22.1	0.0114	0.0553	0	3.00	-0.00142
GWP-biogenic	kg CO ₂ -eq.	-27.2	1.63E-06	4.96E-05	0	1.27	-1.30E-05
GWP-GHG	kg CO ₂ -eq.	5.14	0.0114	0.0553	0	3.02	-0.00142

Table 117: EN15804+A2 EPD Results for 1m² of Superfine® MR 35mm - Scenario analysis - Sequestration at Landfill

Abbreviation	Unit	A1-A3	C1	C2	C3	C4	D
GWP-total	kg CO ₂ -eq.	-25.5	0.0131	0.0635	0	3.44	-0.00162
GWP-biogenic	kg CO ₂ -eq.	-31.3	1.87E-06	5.69E-05	0	1.46	-1.49E-05
GWP-GHG	kg CO ₂ -eq.	5.78	0.0131	0.0634	0	3.47	-0.00163



Tabletop and Wall Inset Melteca® Aged Walnut on a Superfine® substrate
Right Wall Lining Melteca® Dawn Grey on a Superfine® substrate

Material Circularity Indicators (MCIs)

As part of the development of this EPD, thinkstep-anz were commissioned to calculate Material Circularity Indicators (MCIs) for the products in this EPD.

The MCI, developed by the Ellen MacArthur Foundation, has been used to measure the degree to which a product system keeps materials in circulation at their highest form of value. The MCI provides the means to draw together all of the different ways in which circularity can be delivered (e.g. reuse, recycling, bio-materials) and reflects these as a simple score between 0 and 1. The value 0.1 reflects a typical linear system and 1 reflects a perfectly circular system.

A value below 0.1 reflects a product with a utility worse than that of an industry average product (i.e. has a shorter lifetime or a lower use intensity). The methodology is implemented in LCA for Experts and results in a dimensionless number between 0 and 1.

Table 122: MCI Results for Superfine® and Superfine® MR

Product	MCI score
Superfine® Standard 9mm	0.581
Superfine® Standard 12mm	0.572
Superfine® Standard 16mm	0.559
Superfine® Standard 18mm	0.556
Superfine® Standard 25mm	0.562
Superfine® Standard 28.5mm	0.553
Superfine® Standard 30mm	0.555
Superfine® Standard 35mm	0.543
Superfine® MR 9mm	0.573
Superfine® MR 12mm	0.564
Superfine® MR 16mm	0.549
Superfine® MR 18mm	0.546
Superfine® MR 25mm	0.546
Superfine® MR 30mm	0.542
Superfine® MR 35mm	0.534

Additional Environmental Information

- Laminex® Taupo manufactures to the AS/NZS 1859.1 standard and carries out testing in accordance with AS/NZS 4266.1
- Laminex® Taupo is ISO14001 certified
- Laminex® Taupo is FSC (FSC-C102329) and PEFC certified
- All Laminex® Taupo products are Eco Choice Aotearoa certified
- All Laminex® Taupo products are NZ Made registered

References

General Programme Instructions for the International EPD® System. Version 4.0, dated 2021-03-29. www.environdec.com.

PCR 2019:14 Construction Products, Version 1.3.1, 2023-07-08. EPD International.

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Sphera. (2022). Life Cycle Inventory Database 2022 Documentation. Retrieved from Sphera: <https://sphera.com/product-sustainability-gabi-data-search/>

Declaration owner:		Laminex® New Zealand	
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	Post	Laminex NZ, 810 Great South Road, Penrose, Auckland 1061, New Zealand	
Geographical scope:		NZ	
Reference Year for Data		01-07-2020 to 30-06-2021	
EPD programme operator:		EPD Australasia Limited	
	Web	www.epd-australasia.com	
	Email	info@epd-australasia.com	
	Post	EPD Australasia Limited, 315a Hardy Street, Nelson 7010, New Zealand	
Product category rules (PCR):			
CEN standard EN 15804 served as the core Product Category Rules (PCR)			
Product Category Rules (PCR)		PCR 2019.14 Construction Products, version 1.3.1	
PCR review was conducted by		The Technical Committee of the International EPD® System. See www.environdec.com for a list of members.	
Review chair		No chair appointed	
Life cycle assessment (LCA):		thinkstep Ltd	
LCA accountability			
	Web	www.thinkstep-anz.com	
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Third-party verification			
Independent verification of the declaration and data, according to ISO:14025:2006 via		☒ EPD verification by individual verifier	
	Contact	Andrew D. Moore, Life Cycle Logic Pty. Ltd.	
	Web	www.lifecyclelogic.com.au	
	Email	andrew@lifecyclelogic.com.au	
	Post	PO Box 571 Fremantle 6959 Western Australia, Australia	
Verifier approved by		EPD Australasia	
Procedure for follow-up of data during EPD validity involved third-party verifier		☐ yes ☒ no	
Version		Date and Description	
1		November 2023 – Original EPD release	
1.1		December 2023 – Minor changes and clarifications were added regarding the biogenic carbon balance	
1.2		March 2024 – Updated EPD logo and updated the percentage of specific data	

Note: 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 epd-australasia.com

General Information

An Environmental Product Declaration, or EPD, is a standardised and verified way of quantifying the environmental impacts of a product based on a consistent set of rules known as a PCR (Product Category Rules).

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.

The results for EN15804+A1 compliant EPDs are not comparable with EN15804+A2 compliant studies as the methodologies are different. Results that are EN15804+A1 compliant are given in this document to assist comparability across EPDs.



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