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Environmental

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Product

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Declaration

In accordance with ISO 14025 and EN 15804:2012+A2: 2019



Insulated Wall and Roof Panels with a PIR Core

From

Metecno Pty Ltd t/a MetecnoPIR



Australian Made Insulated Building Systems

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Bondor Metecno Insulated Sandwich Panels – made for the Sustainable Challenge



Key Facts

This EPD provides data for 1m² of insulated sandwich panel with a PIR core, manufactured in Australia by MetecnoPIR[®].

This EPD

Published in line with EN 15804 and ISO 14025, providing specific information split by roofing and walling products and detailed by panel thickness.

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General information

An Environmental Product Declaration (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 Product Category Rules (PCR). This is a specific EPD. The EPD owner has the sole ownership, liability, and responsibility for this EPD.

EPD's within the same product category from different programmes may not be comparable. EPD of construction products may not be comparable if they do not comply with EN15804. For further information on comparability, see EN 15804 and ISO 14025.

Program Information

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CEN standard EN 15804+A2:2019/AC2021 serves as the Core Product Category Rules (PCR)

Product category rules (PCR): PCR 2019:14; Construction products (EN 15804+A2) (1.11)

PCR review was conducted by: The Technical Committee of the International EPD® System. A full list of members available on www.environdec.com for a list of members. The review panel may be contacted via info@environdec.com. Review chair: Claudia A. Peña, University of Concepción, Chile.

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

Procedure for follow-up of data during EPD validity involves third party verifier: Yes No

Company information

Table 1 | Company Information

Company Data	
Owner of the EPD	Metecno Pty Ltd t/a MetecnoPIR [®]
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Contact information	techserv@metecno.com.au
Manufacturing Sites	111 Ingram Road, Acacia Ridge, QLD, 4110 9 Amcor Way, Campbellfield, VIC, 3061



Product description

MetecnoPIR® has a wide range of PIR cored wall and roof panels. They consist of two metal facings (predominantly steel) with core material of Polyisocyanurate (PIR).

All products are CodeMark® accredited and conform to the relevant Australian Standards for Structural, Fire, and Thermal requirements. Specific products are fully Factory Mutual Approved (FM Global) an insurance company preferred system. The products are suitable for a range of applications from temperature-controlled environments to industrial, commercial, architectural and residential applications.

Product information

Table 2 | Product Information

Product Type	Product Characteristics	Declared Unit	Products Included
PIR	Insulated sandwich panel for roof and/ or wall applications with a PIR core	1m ²	MetecnoPanel®
			MetecnoInspire®
			MetecnoSpan®
			EconoClad®

Insulated PIR core wall panel

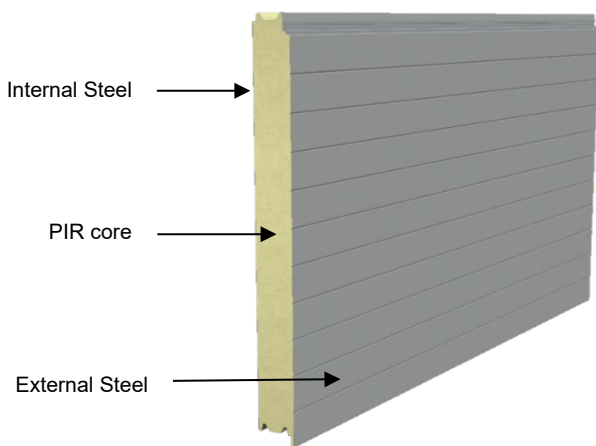


Figure 1 – Typical PIR Walling

Figure 1: typical wall panel

All wall panels have Steel facings and a core material of PIR, in a range of thicknesses from 50mm to 200mm. Steel facings can be plain or profiled and panel joints are engineered and can include secret fixed options.

MetecnoPIR® wall panels

MetecnoPanel® is a durable, insulated wall and ceiling product with a PIR (Polyisocyanurate) fire-retardant core and high performing thermal properties. MetecnoPanel® is FM Approved to FM 4880 & 4881 with no height restriction and is recommended where improved fire performance is required for insurance purposes. MetecnoPanel® is available in a variety of panel surface profiles and COLORBOND® colours to create an inspiring interior and exterior finish.

MetecnoInspire® is an insulated architectural facade system that offers architects and designers an inspiring palette of colours, attractive surface profiles and excellent thermal properties. MetecnoInspire® offers an innovative concealed fix system making it an ideal solution for inspired facade or walling designs.

Insulated PIR core roof panel

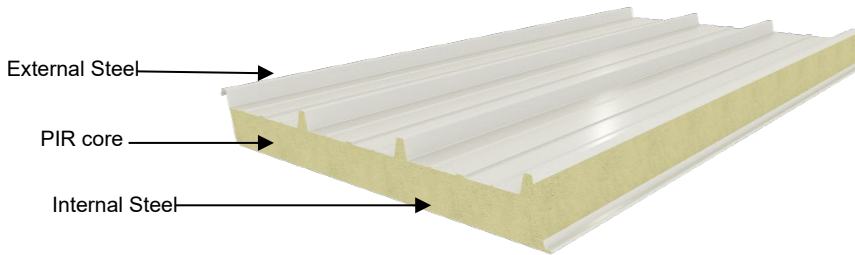


Figure 2: typical roof panel

Figure 2: typical roof panel
All roof panels consist of a trapezoidal roof profile made out of steel, and there are options of steel or foil facings for the ceiling.

The core material is PIR and the panels are produced in a range of thicknesses from 25mm to 100mm, noting the thickness describes the core material exclusive of trapezoidal rib.

MetecnoPIR[®] roof panels

MetecnoSpan[®] is a roofing system that combines the roofing, insulation and ceiling in one panel with a fire-retardant polyisocyanurate (PIR) core. MetecnoSpan[®] is FM Approved to 4880, 4881 & 4471, and is recommended where FM Approved products is required. MetecnoSpan[®] is capable of long spans and high thermal performance and is used mainly in commercial and industrial roofing applications.

EconoClad[®] is a high performing and low-cost roofing or walling insulated panel suitable for industrial and commercial cladding. EconoClad[®] has a non-ozone depleting fire-retardant polyisocyanurate (PIR) core bonded between a hi-tensile COLORBOND[®] or Zinalume[™] steel roof and a silver/white/black, multi-layered foil/fibreglass flexible facings on the internal side. EconoClad[®] is a fast, economical and practical roof or wall cladding option.



Recycled content & reuse

The average recycled content of BlueScope® steel is 17.4%, an additional 6.8% is reclaimed within the steelmaking, coating and painting operations of BlueScope®.

Insulated sandwich panel buildings are long lasting, buildings built in the 1960's are still operational in Australia today. Conservatively we have allowed on average 40 years. Insulated panel buildings can be deconstructed and reassembled at another location, or entire buildings can be transported to another location. Insulated panels are often used in modular construction because they can be factory assemble or they can be built in stages as requirements dictate.

Green star and IS rating

This EPD contributes to the achievement of credits under the green building ratings schemes.

- Independently verified
- Cradle to gate with options, including the modules A1-A5, B2, C1-C4 and D
- Product specific
- Additional Green Star indicators

Environmental Product Declaration

This EPD provides data for 1m² of insulated sandwich panel with a PIR core, manufactured in Australia by MetecnoPIR® at the MetecnoPIR® factories in Brisbane and Melbourne.

MetecnoPIR® panels are manufactured at Acacia Ridge in Queensland and Campbellfield in Victoria. The Acacia Ridge plant manufactures MetecnoSpan®, MetecnoPanel®, EconoClad®, and MetecnoTherm®. The Campbellfield plant manufactures MetecnoInspire®, MetecnoSpan®, and MetecnoPanel®.

This EPD is of the type 'cradle to gate' with modules A4-A5 (construction), B2 (maintenance), C1-C4 (end of life) and module D (reuse, recovery and/or recycling potential). Other life cycle stages are dependent on how the product is used and should be developed and included as part of a holistic assessment of specific construction works.

MetecnoPIR® – Panel for the Sustainable Challenge

Bondor Metecno is Australia's largest manufacturer, distributor and installer of Insulated Sandwich Panels (ISP). Bondor was founded in 1951 and joined with the global Metecno Group in 2001. Metecno® is one of the largest insulated panel businesses in the world with operations in Europe, North and South America, China, South East Asia, South Asia, Australia, New Zealand and the Pacific.

Bondor Metecno has the most extensive coverage for manufacturing insulated sandwich panel in Australia with operations in every state. Bondor Metecno is the only Australian manufacturer of the three internationally recognised insulated panel types, namely EPS-FR cored, Mineral Wool cored, and PIR cored panels. Our portfolio of products means that we have a solution for any project requirement across thermal, fire, structural and acoustic performance.

MetecnoPIR® has manufacturing sites in Brisbane & Melbourne manufacturing insulated sandwich panels with PIR core

The business has invested heavily in research and development including major research programs on sandwich panel performance with Queensland University of Technology and the University of Melbourne. These have included a number of studies into the development and implementation of energy efficient housing and further studies into plastics reduction and recycling in the construction sector.

Inherent advantages of Insulate Sandwich Panels translate into improved sustainability

Our products have a number of inherent advantages over traditional building products in meeting the challenges for an energy efficient and sustainable built environment. The advantages of Insulated Sandwich Panels include:

- Superior thermal performance
- Light weight
- Quick and easy installation
- Continuous insulation with no gaps, crumbling or sagging
- Air tight seal
- Elimination of interstitial condensation with minimal thermal bridging
- Improved spannability over conventional systems, reducing the structural steel and the number of fixing points
- Replacing multiple products in a traditional built-up system with one panel, resulting in reduced material usage, site waste, transport journeys and improving productivity.

Performance advantages of Insulated Sandwich Panel

Performance advantages of Insulated Sandwich Panels include the following:

- Insulated Sandwich Panels provide an energy efficient building envelope without the need to increase the overall thickness of the wall or roof. ISPs are manufactured and installed with an air tight seal, and when mated together they provide superior thermal performance. The performance does not deteriorate as the insulation does not sag or crumble over time. The air tight seal prevents air leakage, significantly reducing the heating and cooling costs over the life of the building.
- Insulated Sandwich Panels conform to Australian Standards for fire performance ranging from Group 1 to Group 2, Bushfire rating of up to BAL-FZ, and non-combustible where required. The panel facings, core type and installation method can be tailored to suit the project requirements and ensure compliance.
- Considering their light weight and ease of construction, Insulated Panels provide impressive acoustic values depending on the core type, with an R_w (Weighted Sound Reduction Index) of between 24 to 30.
- Best-in-class thermal values that are not possible with bulk insulation.
- Bondor Metecno Insulated Sandwich Panels are CodeMark® certified and conform to relevant Australian Standards such as AS 1562.1, AS 4284, AS/NZS 1170 series, AS 4040 series, AS/NZS 4859.1 and 2, AS 1366, AS 5637.1, AS 1530 series, and in some cases AS 5113. The international insurance standards include FM 4880, 4881 and 4471. This simplifies the pathway to compliance.

Leading the way on research into the performance of Insulated Sandwich Panel contribution to a sustainable built environment

Bondor Metecno is committed to developing products that are perpetually sustainable throughout their lifecycle, from manufacture, installation and occupancy through to end-of-life disposal. To this end the business has formalised collaboration with a number of research organisations, industry groups and other interested parties to work on means of improving the sustainability of the business and the construction sector overall. This has resulted in a series of studies, process improvements and new products that are progressively being rolled out across the business.

This approach is a non-linear, organic process as we test and develop approaches and solutions that align with Australian conditions, our customers and other key stakeholders.

These developments have included

- Transferring the inherent advantages of Insulated Sandwich Panel from its traditional place in the cold chain, to residential markets:
 - A home studied by QUT with a family of 4 residing for 12 months, with lived experience achieving 9.5-star energy rating, and the cost of heating & cooling being only 44 cents per day (QUT, 2014).
 - Optimised build time, system modularity and simplification:
 - One insulated roof sheet replacing roof sheet, trusses, insulation and ceiling lining
 - One insulated wall panel replacing external cladding, frames, insulation and internal wall lining
- Insulated sandwich panels can be reused, subject to careful deconstruction and appropriate design of the new building
- Component materials of panel can be recycled individually:
 - Steel facings are 100% recyclable
 - EPS- FR core material can be isolated and compacted for re-use in new forms
 - All core materials can be re-used in current forms, with significant research well advanced to reduce amounts to landfill, as a first step to achieving full circularity and meaningful recyclability/re-use of materials

Third party accreditation

Third party accreditation is a key component of ensuring quality and driving business improvement. Bondor Metecno has the largest number of CodeMark[®] accredited products in the panel industry and has a number of products that are approved by Factory Mutual (FM), an insurance company preferred system. These independent verifications ensure stringent criteria are met, and are subject to ongoing review and audits, ensuring our products meet the critical performance requirements which inspire trust in our brands.

Bondor Metecno have partnered in a study with University of Melbourne aimed at reducing plastics in the construction sector. This study focuses on increasing the reuse and recycling opportunities for plastics within our manufacturing process and from the broader construction sector.

Additionally, Bondor Metecno group is heavily invested in and committed to sustainable manufacturing and building practices, and aligned to the Sustainability Leadership Framework as set out by the Chemistry Australia. Bondor Metecno products are manufactured using non ozone depleting substances, and 80% of our product portfolio are either reusable, or completely recyclable. We are a decentralised manufacturer, with multiple plants closer to the market we serve, reducing the emissions derived from long distance transport, and the overall carbon footprint. We actively employ passive energy techniques where practicable, including rainwater harvesting and aligning production with off peak energy demand periods.

Bondor Metecno is a foundation member of our industry body, The Insulated Panels Association of Australasia (IPCA) which has developed the Code of Practice for the industry and is dedicated to improving the quality and consistency of panel and panel installation. IPCA works closely with other industry groups and regulators and was a contributor to the independent industry study In from the Cold which was tasked with reducing the industry's energy and carbon footprint. Bondor Metecno actively contributes to a variety of committees and research groups developing Australian Standards including the panel industry's Code of Practice for Panel installation and the 2011 study of the performance and impacts of the SEQ floods for insulated panel buildings. Supporting these initiatives,

Bondor Metecno is the only panel manufacturer in Australia with a dedicated NATA approved research and development facility. This facility includes a dedicated structural testing unit with a cyclonic testing capability to replicate the most extreme of Australian conditions.

In broad terms Bondor Metecno Group is committed to improving its carbon footprint and the sustainability of the Australian Built Environment as evidenced by:

Sustainable environmental performance

Bondor Metecno is committed to the continual improvement of our environmental policies and maintaining sustainable building practices, evident throughout involvement with Chemistry Australia's. The full range of Bondor Metecno products are designed and tested for Australian conditions and developed with the health of the Australian environment and community in mind. All of our products use non-ozone-depleting gas and substances, with best-in-class thermal efficiency, which saves in energy costs and benefits the environment (QUT, 2014).

Recyclability

The COLORBOND[®] steel skins of all Bondor Metecno insulated panels are 100% recyclable and have been made using BlueScope steel with 10-30% recycled scrap. Where possible, Bondor Metecno actively source production inputs that are either recycled or recyclable to reduce our environmental footprint. We collaborate with supply partners and research institutions on a range of programs to evaluate opportunities for innovation, and continually invest in the latest technologies to support this.

Reusability

Bondor Metecno insulated panels are installed by a combination of screws, rivets and adhesives; and can be easily disassembled to be reused and reconstructed for other applications. The mastic and or silicone sealant which hold the panels together can be easily removed, whilst the screws and rivets which fix the panels to the steel supports and flashings can be unfastened, and panels removed to be reused on other building sites.

Reduction

Bondor Metecno insulated panels significantly contribute to reducing the required energy to maintain the building's temperature within the comfort range, as they provide a building envelope in one highly insulated composite product (QUT, 2014). In comparison to standard framed construction methods with disrupted insulation resulting in heat loss/gain, Bondor Metecno panels deliver continuous insulation significantly minimizing the effect of thermal bridging (QUT, 2014).

Bondor Metecno insulated panels greatly reduce the amount of material used in the construction process, which reduces landfill over standard framed construction methods due to custom project specific lengths minimising site waste. We have a range of initiatives in our production facilities to actively reclaim and convert production waste to minimise our impact on the environment.

Australia's health

Bondor Metecno insulated panels use non-ozone depleting substances in the manufacture of its insulating core, helping to promote sustainable construction to protect Australia's future. These panels provide a consistent level of insulation that is impervious to compression, water vapor, vermin, termites and rot. This decreases the risks of structural damage whilst improving the living quality for Australia.

These insulated panel products also contribute to Australia through their 'buildability'; as they significantly shorten the construction times, which provides economic, social and environmental benefits to the community.

Global experience, local perspective

As Australia's largest manufacturer of Insulated Sandwich Panels, Bondor Metecno allows its customers to benefit from our global experience coupled with local dedication to Australia. Purchasing high performance building products designed specifically for Australian conditions and using Australian materials including BlueScope[®] COLORBOND[®] steel, reduces the users' impact on the environment, whilst supporting Australian industries.

For more information on Bondor Metecno sustainability practices and best-in-class R-values, please contact us.

LCA information

Table 3 | LCA Information

Product Characteristics	
Declared Unit	1m ² of panel
Modules Included	A1-A5, B2, C1-C4 and D
Reference Service Life (RSL)	40 years
Geographical Coverage	Australia
Time Period	Calendar year 2021

Declared unit

This EPD is valid for 1m² of insulated sandwich panel with a PIR core and steel, foil facings manufactured at MetecnoPIR[®] factories in Melbourne and Brisbane.



Life Cycle Assessment (LCA) Methodology

This EPD has been produced in conformance with the requirements of PCR2019:14, General Program Instructions (GPI) and four information modules according to ISO 21930 and EN 15804.

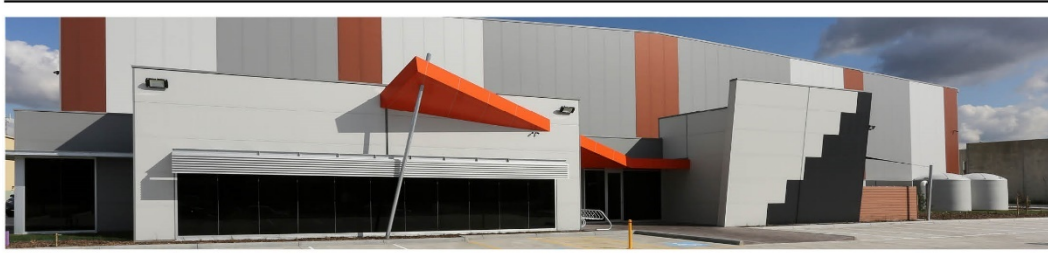
Take care when comparing EPD's

EPD's within the same product category but from different programs may not be comparable

- When comparing EPD data using the comparability requirements in EN 15804, e.g., using equivalent methodology and assumptions such as utilising the same Product Category Rules (PCR).
- When comparing EPD data using the comparability requirements in EN 15804, e.g., using equivalent methodology and assumptions such as utilising the same Product Category Rules (PCR).
- The results for EN 15804:2012+A1:2013 compliant EPDs are not comparable with EN 15804:2012+A2:2019 compliant studies as the methodologies are different. EN 15804:2012+A1:2013 compliant results are given in this document to assist comparability across EPDs and support use in tools such as Green Star.
- LCA provides high-level scientific guidance and differences in data should be substantial to be material. – Understanding the detail is important in comparisons. Expert analysis is required to ensure data is truly comparable, to avoid unintended distortions.

The best way to compare products and materiality of differences is to place them into the context of a structure across the whole life cycle.

Panel Manufacturing



PIR Manufacturing Process in Australia

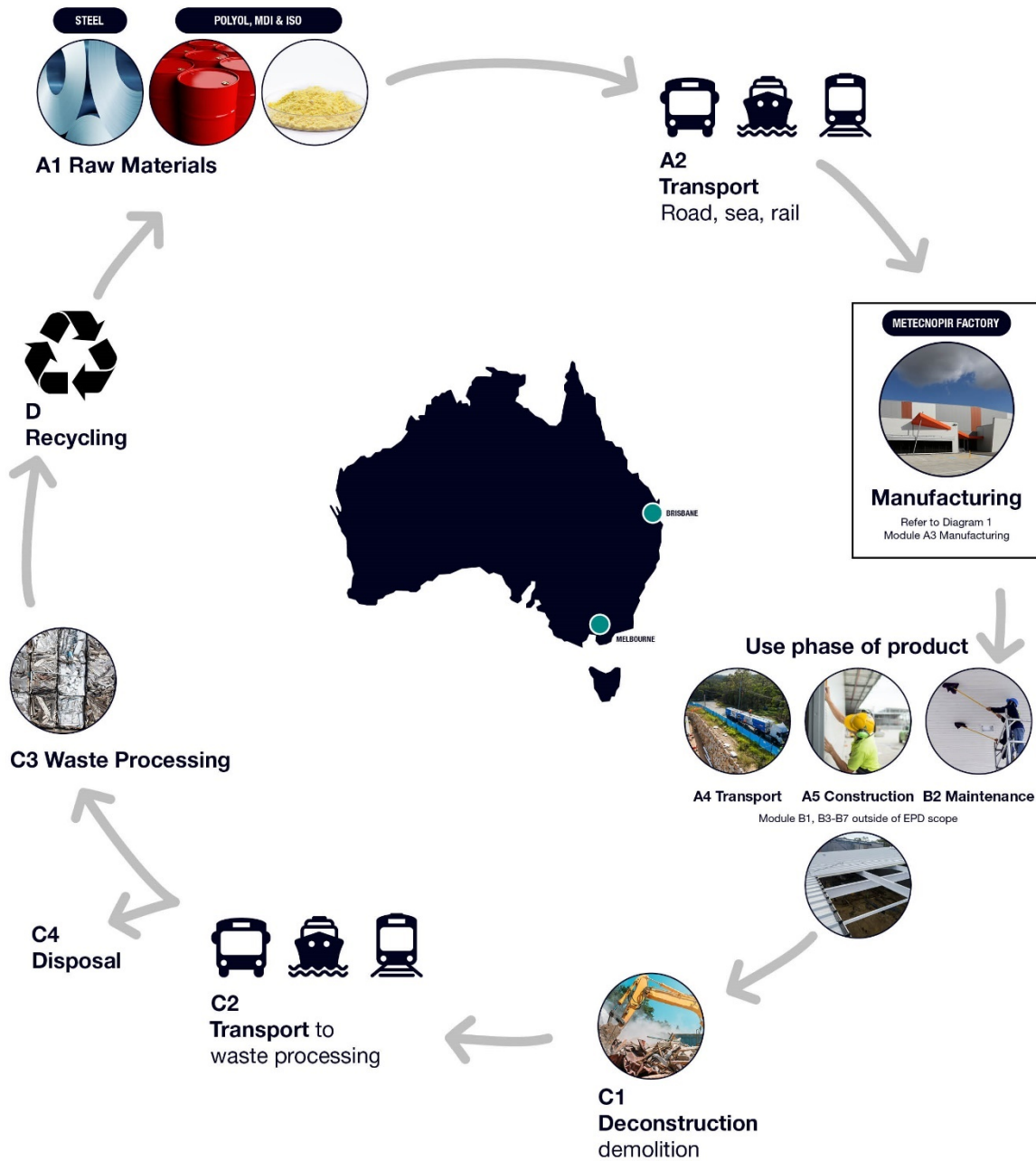


Figure 1 Manufacturing Process for PIR in Australia

Panel Manufacturing (Module A3)

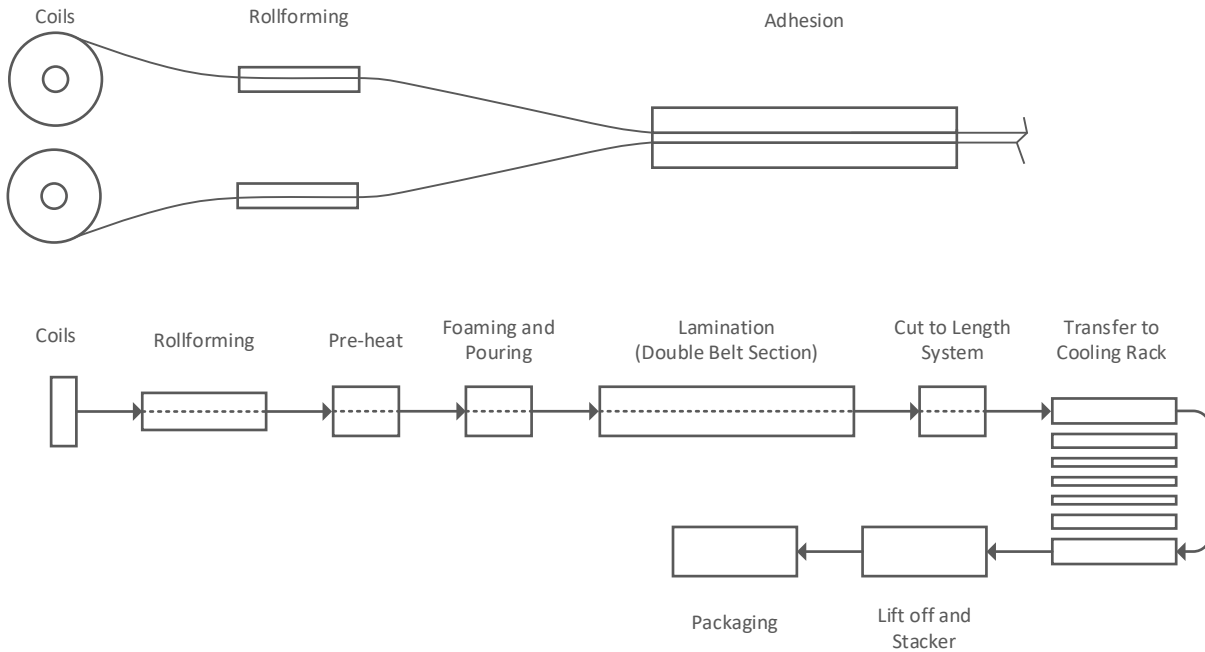


Figure 2 Module A3 Manufacturing process in a PIR factory

Scope of Declaration

The life cycle of a building product is divided into three process modules according to the General Program Instructions (GPI) and four information modules according to ISO 21930 and EN 15804 and supplemented by a module on potential loads and benefits beyond the building life cycle., as given in Table 12.

Table 4 | The life cycle of a building product

Module	Product stage					Construction							Use stage					End of life stage			Resource recovery
	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	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	X	X	ND	X	ND	ND	ND	ND	ND	X	X	X	X	X				
Geography	USA/AU/CN	USA/AU/CN	AU	AU	AU	-	AU	-	-	-	-	-	AU	AU	AU	AU	AU				
Specific data used	>90%					-	-	-	-	-	-	-	-	-	-	-	-				
Variation products	<10%					-	-	-	-	-	-	-	-	-	-	-	-				
Variation sites	Not applicable					-	-	-	-	-	-	-	-	-	-	-	-				

ND = not declared

Cut-off rules

It is common practice in LCA/LCI protocols to propose exclusion limits for inputs and outputs that fall below a threshold % of the total, but with the exception that where the input/output has a “significant” impact it should be included. According to the PCR 2019:14 v1.11, Life cycle inventory data shall according to EN 15804 A2 include a minimum of 95% of total inflows (mass and energy) per module. Inflows not included in the LCA shall be documented in the EPD. Data gaps in included stages in the downstream modules shall be reported in the EPD, including an evaluation of their significance. In accordance with the PCR 2019:14 v1.11, the following system boundaries are applied to manufacturing equipment and employees:

- Environmental impact from infrastructure, construction, production equipment, and tools that are not directly consumed in the production process are not accounted for in the LCI. Capital equipment and buildings typically account for less than a few percent of nearly all LCIs and this is usually smaller than the error in the inventory data itself. For this project, it is assumed that capital equipment makes a negligible contribution to the impacts as per Frischknecht et al. (Frischknecht, 2007) with no further investigation.
- Personnel-related impacts, such as transportation to and from work, are also not accounted for in the LCI. The impacts of employees are also excluded from inventory impacts on the basis that if they were not employed for this production or service function, they would be employed for another. It is very hard to decide what proportion of the impacts from their whole lives should count towards their employment. For this project, the impacts of employees are excluded.
- The transport of scissor lift to and from the installation site is excluded.
- The flame-retardant was not included because of supplier confidentiality and its quantity is less than 1%. The flame retardant is non-hazardous and hexabromocyclododecane (HBCD) free.
- Besides these exclusions, no energy or mass flows were excluded in this LCA report.



Allocation

According to EN 15804 A2:2019, in a process step where more than one type of product is generated, it is necessary to allocate the environmental stressors (inputs and outputs) from the process to the different products (functional outputs) in order to get product-based inventory data instead of process-based data. An allocation problem also occurs for multi-input processes. In an allocation procedure, the sum of the allocated inputs and outputs to the products shall be equal to the unallocated inputs and outputs of the unit process.

The following stepwise allocation principles shall be applied for multi-input/output allocations:

- The initial allocation step includes dividing up the system sub-processes and collecting the input and output data related to these sub-processes.
- The first (preferably) allocation procedure step for each sub-process is to partition the inputs and outputs of the system into their different products in a way that reflects the underlying physical relationships between them.
- The second (worst case) allocation procedure step is needed when physical relationship alone cannot be established or used as the basis for allocation. In this case, the remaining environmental inputs and outputs from a sub-process must be allocated between the products in a way that reflects other relationships between them, such as the economic value of the products.
- For electricity and gas used in the production of each panel, the total manufacturing electricity and gas consumption was divided by the volume of each produced product type.

Data quality and validation

The primary data used for the study is based on direct utility bills or feedstock quantities from MetecnoPIR's procurement records. Primary data was carefully reviewed in order to ensure completeness, accuracy and representativeness of the data supplied. Contribution analysis was used to focus on the key pieces of data contributing to the environmental impact categories. The data was benchmarked against relevant benchmark data in Ecoinvent. Overall, the data was deemed to be of high quality for the core module.

Assumptions, Choices, and Limitations

Table 5 Assumptions or limitations data assessment scheme

Assumption or limitation	Impact on LCA results	Discussion
Insulation foam ingredient composition.	Minor	Information obtained from Bondor Production Team
Panel distribution	Minor	Information obtained from Bondor Production Team
Construction energy	Minor	Direct construction energy use is based on conservative estimates, still not significant to the overall results.
Exclusion of employees, capital good and infrastructure	Minor	
Recycling of panels, esp. steel, after use.	Medium	Few panels are believed to be discarded or disposed into landfill after use. The assumption of 6% of panels being disposed of in landfill is based on assumptions as direct data for Australia was not available at the time of reporting. The recycling rate has impact on Module D avoided production calculations,
Maintenance during use	Low	The panels are assumed to be repainted once over 40 years of use. This is considered a conservative estimate.

Compliance with standards

The methodology and report format has been modified to comply with:

- ISO 14040:2006 and ISO14044:2006+A1:2018 which describe the principles, framework, requirements and provides guidelines for life cycle assessment (LCA).
- ISO 14025:2006 Environmental labels and declarations – Type III environmental declarations -- Principles and procedures, which establishes the principles and specifies the procedures for developing Type III environmental declaration programmes and Type III environmental declarations.
- EN 15804:2012+A1:2013; Sustainability of construction works — Environmental product declarations.
- EN 15804:2012+A2:2019; Sustainability of construction works — Environmental product declarations.
- Product Category Rules (PCR) 2019:14, v1.1 – Construction products – Hereafter referred to as PCR 2019:14.
- General Programme Instructions (GPI) for the International EPD System V3.01 – containing instructions regarding methodology and the content that must be included in EPDs registered under the International EPD System.
- Instructions of EPD Australasia V3.01 – a regional annex to the general programme instructions of the International EPD System.



Environmental Performance

The potential environmental impacts, use of resources and waste categories included in this EPD were calculated using the SimaPro v9.4.0.2 tool and are listed in Table 6. The LCA results are relative expressions and do not predict impacts on category endpoints, the exceeding of thresholds and safety margins or risks.

Table 6 | Life Cycle Impact, Resource and Waste Assessment Categories, Measurements and Methods accordance with EN15804+A2

Impact Category	Abbreviation	Measurement Unit	Assessment Method and Implementation
Global warming potential (fossil)	GWP - Fossil	kg CO ₂ equivalents (GWP100)	Baseline model of 100 years of the IPCC based on IPCC 2013
Global warming potential (biogenic)	GWP - Biogenic	kg CO ₂ equivalents (GWP100)	Baseline model of 100 years of the IPCC based on IPCC 2013
Land use/ land transformation	GWP - Luluc	kg CO ₂ equivalents (GWP100)	Baseline model of 100 years of the IPCC based on IPCC 2013
Total global warming potential	GWP - Total	kg CO ₂ equivalents (GWP100)	Baseline model of 100 years of the IPCC based on IPCC 2013
Acidification potential	AP	mol H ⁺ eq.	Accumulated Exceedance, Seppälä et al. 2006, Posch et al., 2008
Eutrophication – aquatic freshwater	EP - freshwater	kg P equivalent	EUTREND model, Struijs et al., 2009b, as implemented in ReCiPe
Eutrophication – aquatic marine	EP - marine	kg N equivalent	EUTREND model, Struijs et al., 2009b, as implemented in ReCiPe
Eutrophication – terrestrial	EP – terrestrial	mol N equivalent	Accumulated Exceedance, Seppälä et al. 2006, Posch et al.
Photochemical ozone creation potential	POCP	kg NMVOC equivalents	LOTOS-EUROS, Van Zelm et al., 2008, as applied in ReCiPe
Abiotic depletion potential (elements)*	ADPE	kg Sb equivalents	CML (v4.1)
Abiotic depletion potential (fossil fuels)*	ADPF	MJ net calorific value	CML (v4.1)
Ozone depletion potential	ODP	kg CFC 11 equivalents	Steady-state ODPs, WMO 2014
Water Depletion Potential*	WDP	m ³ equivalent deprived	Available WATER REMaining (AWARE) Boulay et al., 2016
Global warming potential, excluding biogenic uptake, emissions and storage	GWP-GHG	kg CO ₂ equivalents (GWP100)	CML (v4.1)
Resource use			
Use of renewable primary energy excluding renewable primary energy resources used as raw materials	PERE	MJ, net calorific value	ecoinvent version 3.6 and expanded by PRé Consultants ¹
Use of renewable primary energy resources used as raw materials	PERM	MJ, net calorific value	Manual for direct inputs ²
Total use of renewable primary energy resources (primary energy and primary energy resources used as raw materials)	PERT	MJ, net calorific value	ecoinvent version 3.6 and expanded by PRé Consultants
Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials	PENRE	MJ, net calorific value	Manual for direct inputs ³
Use of non- renewable primary energy resources used as raw materials	PENRM	MJ, net calorific value	ecoinvent version 3.6 and expanded by PRé Consultants
Total use of non- renewable primary energy resources (primary energy and primary energy resources used as raw materials)	PENRT	MJ, net calorific value	ecoinvent version 3.6 and expanded by PRé Consultants ⁴

Use of secondary material	SM	kg	Manual for direct inputs
Use of renewable secondary fuels	RSF	MJ, net calorific value	Manual for direct inputs
Use of non-renewable secondary fuels	NRSF	MJ, net calorific value	Manual for direct inputs
Use of net fresh water	FW	m ³	ReCiPe 2016
Waste categories			
Hazardous waste disposed	HWD	kg	EDIP 2003 (v1.05)
Non-hazardous waste disposed	NHWD	kg	EDIP 2003 (v1.05) ⁵
Radioactive waste disposed/stored	RWD	kg	EDIP 2003 (v1.05)
Additional environmental impact indicators			
Particulate matter	Potential incidence of disease due to PM emissions (PM)	Disease incidence	SETAC-UNEP, Fantke et al. 2016
Ionising radiation - human health**	Potential Human exposure efficiency relative to U235 (IRP)	kBq U-235 eq	Human Health Effect model
Eco-toxicity (freshwater)*	Potential Comparative Toxic Unit for ecosystems (ETP-fw)	CTUe	USEtox
Human toxicity potential - cancer effects*	Potential Comparative Toxic Unit for humans (HTP-c)	CTUh	USEtox
Human toxicity potential - non cancer effects*	Potential Comparative Toxic Unit for humans (HTP-nc)	CTUh	USEtox
Soil quality*	Potential soil quality index (SQP)	dimensionless	Soil quality index (LANCA®)

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

**Disclaimer – 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 from some construction materials is also not measured by this indicator.

¹ Method to calculate Cumulative Energy Demand (CED), based on the method published by Ecoinvent version 2.0 and expanded by PRé Consultants for raw materials available in the SimaPro database.

² Calculated based on the lower hearing value of renewable raw materials.

³ Calculated based on the lower hearing value of non-renewables raw materials.

⁴ Calculated as sum of Non-renewables, fossil, Non-renewable, nuclear and Non-renewable, biomass.

⁵ Calculated as sum of Bulk waste and Slags/ash

Table 7 | Environmental impact indicators in accordance with EN15804+A1

Impact Category	Abbreviation	Measurement Unit (eq. = equivalence)	Assessment Method and Implementation
Global warming potential (GWP100)	GWP	kg CO ₂ eq.	CML (v4.02) based on IPCC AR4
Ozone depletion potential	ODP	kg CFC 11 eq.	CML (v4.02) based on WMO 1999
Acidification potential	AP	kg SO ₂ e eq.	CML (v4.02)
Eutrophication potential	EP	kg PO ₄ ³⁻ eq.	CML (v4.02)
Photochemical ozone creation potential	POCP	kg C ₂ H ₄ eq.	CML (v4.2)
Abiotic depletion potential for non-fossil resources	ADPE	kg Sb eq.	CML (v4.2)
Abiotic depletion potential for fossil resources	ADPF	MJ net calorific value	CML (v4.2)

Table 8 | Environmental impact indicators in accordance with Green Star v1.3

Impact Category	Abbreviation	Measurement Unit (eq. = equivalence)	Assessment Method and Implementation
Human toxicity cancer	HTPc	CTUh	USEtox – cancer effect
Human toxicity noncancer	HTPnc	CTUh	USEtox – noncancer effect
Land use	LU	kg C deficit-eq.	Soil Organic Matter method
Resource depletion - water	RDW	m ³	Water Stress Indicator
Ionising radiation	IR	kBq U-235-eq.	Human Health Effect model
Particulate matter	PM	kg PM2.5-eq.	RiskPoll

Content information

Walling product content information

Table 9 | Material Content for 1m² of PIR Insulated Panels – MetecnoPanel®

Items		Mass (%)	Post-consumer material (%)	Pre-consumer material (%)
MetecnoPanel®	Steel	63 - 88	8.5	6.5
	Polyisocyanurate	11 - 35	0	0
	Pentane	1	0	0

Note: Insulated sandwich panels for walling have two steel skins and an insulating core material.

MetecnoPanel® has two steel skins both are 0.5mm COLORBOND® steel.

None of the products contain one or more substances that are listed in the “Candidate List of Substances of Very High Concern for authorisation”. According to the PCR 2019:14, if one or more substances of the “Candidate List of Substances of Very High Concern (SVHC) for authorisation” are present in a product and their total content exceeds 0.1% of the weight of the product, they need to be reported.

Table 10 | Material Content for 1m² of PIR Insulated Panels – MetecnoInspire®

Items		Mass (%)	Post-consumer material (%)	Pre-consumer material (%)
MetecnoInspire®	Steel	81 - 89	8.5	6.5
	Polyisocyanurate	10 - 16	0	0
	Pentane	1	0	0

Note: Insulated sandwich panels for walling have two steel skins and an insulating core material.

MetecnoInspire® has two steel skins, one is 0.5mm COLORBOND® steel and the other is 0.6mm COLORBOND® steel.

None of the products contain one or more substances that are listed in the “Candidate List of Substances of Very High Concern for authorisation”. According to the PCR 2019:14, if one or more substances of the “Candidate List of Substances of Very High Concern (SVHC) for authorisation” are present in a product and their total content exceeds 0.1% of the weight of the product, they need to be reported.

Walling packaging content information

Table 11 | Information for walling packaging materials

Panel	Packaging materials	Weight (%) versus the product		Weight (kg)	
		Min	Max	Min	Max
MetecnoPanel®	Expanded Polystyrene	1.89%	3.67%	2.20E-01	6.00E-01
	Polyethylene Strap	1.03%	2.45%	1.20E-01	4.00E-01
	Corflute	0.44%	0.54%	5.10E-02	8.80E-02
MetecnoInspire®	Expanded Polystyrene	1.69%	2.08%	2.20E-01	3.00E-01
	Polyethylene Strap	0.92%	1.38%	1.20E-01	2.00E-01
	Corflute	0.39%	0.45%	5.10E-02	6.50E-02

Roofing product content information

Table 12 | Material Content for 1m² of PIR Insulated Panels – MetecnoSpan[®]

Items		Mass (%)	Post-consumer material (%)	Pre-consumer material (%)
MetecnoSpan [®]	Steel	78 - 89	8.5	6.5
	Polyisocyanurate	10 - 21	0	0
	Pentane	1	0	0

Note: Insulated sandwich panels for roofing can have different configurations when it comes to facing material.

MetecnoSpan[®] always has two steel skins one panel has two steel skins the external skin is always 0.42 mm COLORBOND[®] steel, the internal skin is both are 0.5 mm COLORBOND[®] steel.

None of the products contain one or more substances that are listed in the “Candidate List of Substances of Very High Concern for authorisation”. According to the PCR 2019:14, if one or more substances of the “Candidate List of Substances of Very High Concern (SVHC) for authorisation” are present in a product and their total content exceeds 0.1% of the weight of the product, they need to be reported.

Table 13 | Material Content for 1m² of PIR Insulated Panels – EconoClad[®]

Items		Mass (%)	Post-consumer material (%)	Pre-consumer material (%)
EconoClad [®]	Steel	62 - 84	8.5	6.5
	Foilback	2	0	0
	Polyisocyanurate	13 - 26	0	0
	Pentane	1 - 2	0	0

Note: Insulated sandwich panels for roofing can have different configurations when it comes to facing material.

EconoClad[®] has one steel skin the external skin is always 0.42mm COLORBOND[®] steel. The internal skin is foil facing.

None of the products contain one or more substances that are listed in the “Candidate List of Substances of Very High Concern for authorisation”. According to the PCR 2019:14, if one or more substances of the “Candidate List of Substances of Very High Concern (SVHC) for authorisation” are present in a product and their total content exceeds 0.1% of the weight of the product, they need to be reported.

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Roofing packaging content information

Table 14 | Information for roofing packaging materials

Panel	Packaging materials	Weight (%) versus the product		Weight (kg)	
		Min	Max	Min	Max
MetecnoSpan®	Expanded Polystyrene	1.96%	2.33%	2.20E-01	3.00E-01
	Polyethylene Strap	1.25%	1.55%	1.40E-01	2.00E-01
	Corflute	0.49%	0.50%	5.50E-02	6.50E-02
EconoClad®	Expanded Polystyrene	3.76%	3.81%	2.20E-01	3.00E-01
	Polyethylene Strap	2.05%	2.51%	1.20E-01	2.00E-01
	Corflute	0.82%	0.87%	5.10E-02	6.50E-02

Biogenic carbon

There's no biogenic carbon in the product and its packaging doesn't contain any biological material.

Additional information on release of dangerous substances to indoor air, soil and water

The products are highly inert and are used predominantly in outdoor applications. They do not release any dangerous substances to indoor air, soil, or water.

Transport (Module A4)

The transport distances from manufacturing gate were calculated based on primary data from MetecnoPIR percentage of total products shipped to each state with the distance of 88 - 700 km. The transport is m² product constrained.

Installation (Module A5)

0.17 kWh of electricity is required for machinery used during the construction for panel under 200 mm and 0.24 kg of diesel is used for scissor lift for panel over 200 mm. The panels are trimmed and prepared before being installed with screws and rivets to hold the structure in place. The installation procedures are the same across all panel products. Most panels/boards are installed without any offcuts. The offcuts are equivalent to 0.09% of panel weight and are neglected due to the small amount. Disposal for packaging materials is included in this module.

Maintenance (Module B2)

The exterior facing (top) panel side is assumed to be repainted once over the 40-year lifespan of the panel with two coating layers.

Table 15 Maintenance process

Input	Description per functional unit
Maintenance process	Repaint
Maintenance cycle	1 per lifespan of 40 years
Acrylic paint 25 um	1m ²

Disposal / Reuse / Recycling (Module C1-C4)

The scenarios included are currently in use and are representative for one of the most probable alternatives. Following the use of the panels, Bondor Metecno has limited evidence of what the end-of-life fate for their panels. The recommended cradle to grave environmental profile will be based on the most common scenario as panels are deconstructed and transported to material recovery facilities. The steel is recovered and returned into recycling stream. The included scenarios are based on the most likely outcomes of the products at the end-of-life.

The following assumptions have been used in this study to model panel deconstruction and end of life scenarios:

- Diesel fuel consumption for deconstruction has been calculated based on the gravitational potential energy required to lift a typical panel 10m above ground, assuming 15% diesel energy conversion into effective work.
- 6% of the panels are assumed to be discarded during deconstruction and disposed in landfill.
- 100km delivery distance to landfill, material recovery facility is assumed for waste collection process.
- Material recovery processing is modelled including collection, sorting and processing steel scrap in AusLCI database, assuming
 - 100% of insulation foam from material recovery processing disposed in landfill
 - 100% of steel sheets from material recovery processing returned into the steel recycling stream.

Benefits and loads beyond the system boundary (Module D)

The information in module D may contain technical information as well as LCA results from post-consumer recycling, i.e., environmental benefits or loads resulting from reusable products, recyclable materials and/or useful energy carriers leaving a product system e.g., as secondary materials or fuels. Avoided impacts from co-products from module A to C shall not be included in Module D.

Regarding an assumption that 6% of panels were destroyed during the demolition process, the recovery rate after use is 94%, as mentioned in the previous section, and 100% steel is recycled.

Environmental information

EPDs within the same product category but from different programs may not be comparable. EPDs of construction products may not be comparable if they do not comply with EN 15804. For further information about comparability, see EN 15804 and ISO 14025.

Walling

MetecnoPanel®

MetecnoPanel® 50mm

Table 16 | Environmental impacts per m² of MetecnoPanel® 50mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Global warming potential - fossil	GWP - Fossil	kg CO ₂ eq.	4.99E+01	1.25E-03	1.45E-01	1.78E+00	1.39E-01	4.76E-03	2.26E+00	1.64E-01	-7.82E+00
Global warming potential - biogenic	GWP - Biogenic	kg CO ₂ eq.	2.11E-02	6.41E-08	1.22E-01	2.94E-03	4.85E-04	1.13E-07	6.89E-03	1.09E-04	3.50E-03
Global warming potential - land use/ land transformation	GWP - Luluc	kg CO ₂ eq.	1.27E-02	1.04E-08	7.54E-05	5.63E-06	2.87E-08	3.48E-08	8.52E-07	1.95E-05	-8.17E-07
Global warming potential - total	GWP - Total	kg CO₂ eq.	4.99E+01	1.25E-03	2.67E-01	1.78E+00	1.40E-01	4.76E-03	2.26E+00	1.64E-01	-7.82E+00
Ozone depletion potential	ODP	kg CFC 11 eq.	1.73E-06	1.89E-10	8.22E-08	5.04E-08	2.66E-10	1.94E-10	2.20E-08	5.71E-09	-1.58E-08
Acidification potential	AP	mol H ⁺ eq.	2.24E-01	9.81E-06	1.67E-03	9.09E-03	1.02E-03	3.25E-05	1.48E-02	1.62E-04	-7.15E-02
Eutrophication – freshwater	EP - F	kg P eq.	3.13E-03	4.35E-08	-1.37E-05	1.68E-04	5.50E-06	1.79E-07	8.57E-05	2.71E-06	-1.77E-04
Eutrophication – marine	EP - M	kg N eq.	5.23E-02	2.80E-06	2.45E-04	1.55E-03	1.51E-04	9.17E-06	2.38E-03	2.95E-03	-1.43E-02
Eutrophication – terrestrial	EP - T	mol N eq.	5.04E-01	3.07E-05	2.69E-03	1.32E-02	1.62E-03	1.00E-04	2.57E-02	5.90E-04	-1.63E-01
Photochemical ozone creation potential	POCP	kg NMVOC eq.	1.57E-01	7.58E-06	8.20E-04	3.85E-03	4.26E-04	2.46E-05	6.65E-03	2.04E-04	-3.88E-02
Abiotic depletion potential - minerals and metals	ADP	kg Sb eq.	3.10E-04	4.59E-09	3.04E-06	4.06E-06	1.81E-07	2.30E-08	3.05E-06	5.83E-08	-2.29E-06
Abiotic depletion potential - fossil fuels	ADPF	MJ	6.72E+02	1.77E-02	2.04E+00	3.19E+01	6.63E-01	2.42E-02	1.44E+01	4.67E-01	-1.03E+02
Water Depletion Potential	WDP	m ³	1.30E+01	3.71E-04	6.55E-01	3.47E+01	2.28E-02	5.05E-02	1.31E+00	1.89E-02	-5.55E+01

Table 17 | Resource use per m² of MetecnoPanel® 50mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Use of renewable primary energy excluding renewable primary energy resources used as raw materials	PERE	MJ	2.54E+01	1.84E-04	4.02E-01	3.26E-01	1.20E-01	7.70E-04	1.65E+00	7.95E-03	-1.13E+00
Use of renewable primary energy resources used as raw materials	PERM	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	0.00E+00
Primary renewable energy - total	PERT	MJ	2.54E+01	1.84E-04	4.02E-01	3.26E-01	1.20E-01	7.70E-04	1.65E+00	7.95E-03	-1.13E+00
Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials	PENRE	MJ	6.00E+02	1.77E-02	5.17E+00	3.19E+01	6.63E-01	2.42E-02	1.44E+01	4.67E-01	-1.03E+02
Use of non-renewable primary energy resources used as raw materials	PENRM	MJ	7.08E+01	0.00E+00	-1.56E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-5.49E+01	0.00E+00
Primary non renewable energy - total	PENRT	MJ	6.71E+02	1.77E-02	-1.05E+01	3.19E+01	6.63E-01	2.42E-02	1.44E+01	-5.44E+01	-1.03E+02
Use of secondary material	SM	kg	1.22E+00	0.00E+00	1.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of renewable secondary fuels	RSF	MJ	3.70E-14	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of non-renewable secondary fuels	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	0.00E+00
Use of net fresh water	FW	m ³	1.47E-01	2.12E-06	4.72E-04	3.67E-03	1.14E-04	8.44E-06	2.06E-03	2.65E-04	-2.84E-03

Table 18 | Waste generated per m² of MetecnoPanel® 50mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Hazardous waste disposed	HWD	kg	2.17E-04	2.34E-08	-2.86E-06	1.08E-05	4.50E-07	7.58E-08	7.78E-06	6.65E-07	-9.27E-06
Non-hazardous waste disposed	NHWD	kg	1.85E+00	1.23E-04	3.52E-01	6.54E-02	8.58E-03	4.86E-04	2.27E-01	1.98E+00	-1.17E+00
Radioactive waste disposed/stored	RWD	kg	1.98E-03	9.34E-11	3.33E-05	6.94E-06	4.39E-09	3.29E-10	8.46E-08	2.64E-06	-9.56E-08

Table 19 | Output flows per m² of MetecnoPanel® 50mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Components for reuse	CRU	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	0.00E+00
Materials for recycling	MFR	kg	3.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.42E+00	0.00E+00	0.00E+00
Materials for energy recovery	MFRE	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	0.00E+00
Exported energy - electricity	EE - e	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	0.00E+00
Exported energy - thermal	EE - t	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	0.00E+00

Table 20 | Additional environmental impacts per m² of MetecnoPanel® 50mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Global warming potential, excluding biogenic uptake, emissions and storage	GWP-GHG	kg CO ₂ eq	1.52E+01	1.22E-03	1.46E-01	1.68E+00	1.37E-01	4.67E-03	2.23E+00	1.24E-01	-6.74E+00
Particulate matter	PM	disease incidence	2.37E-06	6.46E-11	4.97E-09	8.57E-08	8.88E-09	2.54E-10	1.30E-07	3.09E-09	-4.88E-07
Ionising radiation - human health	IRP	kBq U-235 eq	8.59E-01	6.75E-07	2.98E-02	4.85E-02	3.05E-05	2.30E-06	5.90E-04	2.10E-03	-6.63E-04
Ecotoxicity - freshwater	ETP - fw	CTUe	6.58E+02	9.52E-03	1.84E+00	7.90E+00	3.79E-01	8.14E-02	6.83E+00	7.90E-01	-1.49E+02
Human toxicity potential - cancer effects	HTP - c	CTUh	1.41E-07	3.26E-13	3.34E-09	4.00E-10	2.43E-11	1.87E-12	3.75E-10	1.32E-11	-1.42E-09
Human toxicity potential - non cancer effects	HTP - nc	CTUh	1.39E-06	1.16E-11	2.68E-09	7.25E-09	7.26E-10	7.92E-11	1.17E-08	3.48E-10	-9.77E-08
Soil quality	SQP	Pt	4.98E+01	4.72E-03	1.47E+00	6.96E-01	4.26E-01	2.15E-02	6.15E+00	1.00E+00	-1.24E+01

Table 21 | Environmental impacts per m² of MetecnoPanel® 50mm (results are in accordance with EN15804+A1:2013)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Global warming potential	GWP	kg CO ₂ eq	4.82E+01	1.22E-03	2.13E-01	1.72E+00	1.38E-01	4.67E-03	2.23E+00	1.41E-01	-6.73E+00
Ozone layer depletion	ODP	kg CFC-11 eq	1.65E-06	1.49E-10	7.27E-08	1.54E-10	2.33E-10	1.54E-10	1.80E-08	4.52E-09	-1.26E-08
Acidification potential	AP	kg SO ₂ eq	1.59E-01	5.19E-06	6.71E-04	1.50E-05	2.11E-04	1.50E-05	3.48E-03	1.23E-04	-4.42E-02
Eutrophication potential	EP	kg PO ₄ ³⁻ eq	3.06E-02	1.19E-06	4.94E-05	3.79E-06	7.30E-05	3.79E-06	1.15E-03	1.25E-03	-6.09E-03
Photochemical ozone creation potential	POCP	kg C2H4 eq	2.47E-02	3.49E-07	1.27E-04	9.72E-07	4.31E-06	9.72E-07	8.15E-05	2.50E-05	-1.61E-02
Abiotic depletion potential for non-fossil resources	ADPE	kg Sb eq	3.10E-04	4.59E-09	3.04E-06	2.30E-08	1.81E-07	2.30E-08	3.05E-06	5.84E-08	-2.29E-06
Abiotic depletion potential for fossil resources	ADPF	MJ	6.33E+02	1.78E-02	5.36E+00	7.00E-02	1.55E+00	7.00E-02	2.67E+01	4.40E-01	-1.53E+02

Table 22 | Environmental impacts per m² of MetecnoPanel® 50mm (results are in accordance with Green Star v1.3)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Human Toxicity cancer	HTc	CTUh	1.31E-07	2.74E-14	1.12E-11	4.62E-14	5.02E-12	4.62E-14	7.45E-11	1.34E-12	-3.72E-10
Human Toxicity non-cancer	HTnc	CTUh	8.45E-08	6.16E-15	1.56E-12	1.04E-14	8.52E-13	1.04E-14	1.21E-11	2.14E-13	-9.55E-12
Land use	LU	kg C deficit eq.	1.49E+01	3.21E-03	8.57E-01	5.41E-03	1.23E-02	5.41E-03	3.91E-01	3.50E-01	-1.45E+00
Ionising radiation	IR	kBq U235 eq	8.61E-01	6.59E-07	2.99E-02	1.11E-06	3.06E-05	1.11E-06	5.90E-04	2.10E-03	-6.63E-04
Particulate Matter	PM	kg PM2,5-Equiv.	2.27E-02	1.20E-06	1.33E-04	2.02E-06	7.30E-05	2.02E-06	1.14E-03	3.79E-05	-8.59E-03
Resource depletion - water	RDW	m ³	2.36E-01	5.87E-06	1.65E-03	9.91E-06	9.97E-04	9.91E-06	1.48E-02	6.07E-04	-7.76E-03

MetecnoPanel® 75mm

Table 23 | Environmental impacts per m² of MetecnoPanel® 75mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Global warming potential - fossil	GWP - Fossil	kg CO ₂ eq.	5.51E+01	1.41E-03	1.18E-01	1.78E+00	1.39E-01	5.05E-03	2.26E+00	2.46E-01	-7.82E+00
Global warming potential - biogenic	GWP - Biogenic	kg CO ₂ eq.	2.55E-02	7.09E-08	1.54E-01	2.94E-03	4.85E-04	1.20E-07	6.89E-03	1.63E-04	3.50E-03
Global warming potential - land use/ land transformation	GWP - Luluc	kg CO ₂ eq.	1.73E-02	1.17E-08	7.75E-05	5.63E-06	2.87E-08	3.69E-08	8.52E-07	2.79E-05	-8.17E-07
Global warming potential - total	GWP - Total	kg CO₂ eq.	5.51E+01	1.41E-03	2.72E-01	1.78E+00	1.40E-01	5.05E-03	2.26E+00	2.46E-01	-7.82E+00
Ozone depletion potential	ODP	kg CFC 11 eq.	2.57E-06	2.13E-10	8.20E-08	5.04E-08	2.66E-10	2.06E-10	2.20E-08	7.97E-09	-1.58E-08
Acidification potential	AP	mol H ⁺ eq.	2.54E-01	1.11E-05	1.62E-03	9.09E-03	1.02E-03	3.45E-05	1.48E-02	2.29E-04	-7.15E-02
Eutrophication – freshwater	EP - F	kg P eq.	4.59E-03	4.91E-08	-2.57E-05	1.68E-04	5.50E-06	1.90E-07	8.57E-05	3.94E-06	-1.77E-04
Eutrophication – marine	EP - M	kg N eq.	6.10E-02	3.17E-06	2.37E-04	1.55E-03	1.51E-04	9.73E-06	2.38E-03	4.45E-03	-1.43E-02
Eutrophication – terrestrial	EP - T	mol N eq.	5.63E-01	3.47E-05	2.60E-03	1.32E-02	1.62E-03	1.06E-04	2.57E-02	8.34E-04	-1.63E-01
Photochemical ozone creation potential	POCP	kg NMVOC eq.	1.78E-01	8.57E-06	7.32E-04	3.85E-03	4.26E-04	2.62E-05	6.65E-03	2.91E-04	-3.88E-02
Abiotic depletion potential - minerals and metals	ADP	kg Sb eq.	4.24E-04	5.18E-09	3.24E-06	4.06E-06	1.81E-07	2.44E-08	3.05E-06	8.45E-08	-2.29E-06
Abiotic depletion potential - fossil fuels	ADPF	MJ	7.97E+02	2.00E-02	1.06E+00	3.19E+01	6.63E-01	2.57E-02	1.44E+01	6.57E-01	-1.03E+02
Water Depletion Potential	WDP	m ³	1.71E+01	4.19E-04	8.09E-01	3.47E+01	2.28E-02	5.36E-02	1.31E+00	2.65E-02	-5.55E+01

Table 24 | Resource use per m² of MetecnoPanel® 75mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Use of renewable primary energy excluding renewable primary energy resources used as raw materials	PERE	MJ	2.90E+01	2.08E-04	4.40E-01	3.26E-01	1.20E-01	8.17E-04	1.65E+00	1.16E-02	-1.13E+00
Use of renewable primary energy resources used as raw materials	PERM	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	0.00E+00
Primary renewable energy - total	PERT	MJ	2.90E+01	2.08E-04	4.40E-01	3.26E-01	1.20E-01	8.17E-04	1.65E+00	1.16E-02	-1.13E+00
Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials	PENRE	MJ	6.92E+02	2.00E-02	5.02E+00	3.19E+01	6.63E-01	2.57E-02	1.44E+01	6.57E-01	-1.03E+02
Use of non-renewable primary energy resources used as raw materials	PENRM	MJ	1.03E+02	0.00E+00	-1.98E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-8.29E+01	0.00E+00
Primary non renewable energy - total	PENRT	MJ	7.95E+02	2.00E-02	-1.48E+01	3.19E+01	6.63E-01	2.57E-02	1.44E+01	-8.23E+01	-1.03E+02
Use of secondary material	SM	kg	1.22E+00	0.00E+00	1.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of renewable secondary fuels	RSF	MJ	3.70E-14	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of non-renewable secondary fuels	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	0.00E+00
Use of net fresh water	FW	m ³	1.85E-01	2.39E-06	3.88E-04	3.67E-03	1.14E-04	8.96E-06	2.06E-03	3.72E-04	-2.84E-03

Table 25 | Waste generated per m² of MetecnoPanel® 75mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Hazardous waste disposed	HWD	kg	3.12E-04	2.64E-08	-6.11E-06	1.08E-05	4.50E-07	8.04E-08	7.78E-06	9.36E-07	-9.27E-06
Non-hazardous waste disposed	NHWD	kg	2.34E+00	1.39E-04	4.28E-01	6.54E-02	8.58E-03	5.16E-04	2.27E-01	2.68E+00	-1.17E+00
Radioactive waste disposed/stored	RWD	kg	2.12E-03	1.05E-10	3.43E-05	6.94E-06	4.39E-09	3.49E-10	8.46E-08	3.69E-06	-9.56E-08

Table 26 | Output flows per m² of MetecnoPanel® 75mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Components for reuse	CRU	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	0.00E+00
Materials for recycling	MFR	kg	3.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.42E+00	0.00E+00	0.00E+00
Materials for energy recovery	MFRE	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	0.00E+00
Exported energy - electricity	EE - e	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	0.00E+00
Exported energy - thermal	EE - t	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	0.00E+00

Table 27 | Additional environmental impacts per m² of MetecnoPanel® 75mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Global warming potential, excluding biogenic uptake, emissions and storage	GWP-GHG	kg CO ₂ eq	2.02E+01	1.38E-03	1.21E-01	1.68E+00	1.37E-01	4.96E-03	2.23E+00	1.86E-01	-6.74E+00
Particulate matter	PM	disease incidence	2.62E-06	7.29E-11	2.01E-09	8.57E-08	8.88E-09	2.69E-10	1.30E-07	4.36E-09	-4.88E-07
Ionising radiation - human health	IRP	kBq U-235 eq	1.15E+00	7.62E-07	3.20E-02	4.85E-02	3.05E-05	2.44E-06	5.90E-04	2.98E-03	-6.63E-04
Ecotoxicity - freshwater	ETP - fw	CTUe	9.76E+02	1.08E-02	1.10E+00	7.90E+00	3.79E-01	8.64E-02	6.83E+00	1.16E+00	-1.49E+02
Human toxicity potential - cancer effects	HTP - c	CTUh	2.10E-07	3.68E-13	3.96E-09	4.00E-10	2.43E-11	1.98E-12	3.75E-10	1.92E-11	-1.42E-09
Human toxicity potential - non cancer effects	HTP - nc	CTUh	2.07E-06	1.31E-11	2.63E-09	7.25E-09	7.26E-10	8.41E-11	1.17E-08	5.07E-10	-9.77E-08
Soil quality	SQP	Pt	6.26E+01	5.31E-03	1.51E+00	6.96E-01	4.26E-01	2.28E-02	6.15E+00	1.42E+00	-1.24E+01

Table 28 | Environmental impacts per m² of MetecnoPanel® 75mm (results are in accordance with EN15804+A1:2013)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Global warming potential	GWP	kg CO ₂ eq	5.32E+01	1.38E-03	2.06E-01	1.72E+00	1.38E-01	4.96E-03	2.23E+00	2.11E-01	-6.73E+00
Ozone layer depletion	ODP	kg CFC-11 eq	2.46E-06	1.69E-10	7.24E-08	1.63E-10	2.33E-10	1.63E-10	1.80E-08	6.32E-09	-1.26E-08
Acidification potential	AP	kg SO ₂ eq	1.83E-01	5.87E-06	6.08E-04	1.59E-05	2.11E-04	1.59E-05	3.48E-03	1.74E-04	-4.42E-02
Eutrophication potential	EP	kg PO ₄ ³⁻ eq	3.92E-02	1.34E-06	1.02E-05	4.03E-06	7.30E-05	4.03E-06	1.15E-03	1.89E-03	-6.09E-03
Photochemical ozone creation potential	POCP	kg C2H4 eq	2.85E-02	3.94E-07	1.14E-04	1.03E-06	4.31E-06	1.03E-06	8.15E-05	3.73E-05	-1.61E-02
Abiotic depletion potential for non-fossil resources	ADPE	kg Sb eq	4.24E-04	5.18E-09	3.24E-06	2.44E-08	1.81E-07	2.44E-08	3.05E-06	8.45E-08	-2.29E-06
Abiotic depletion potential for fossil resources	ADPF	MJ	7.29E+02	2.01E-02	5.10E+00	7.43E-02	1.55E+00	7.43E-02	2.67E+01	6.20E-01	-1.53E+02

Table 29 | Environmental impacts per m² of MetecnoPanel® 75mm (results are in accordance with Green Star v1.3)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Human Toxicity cancer	HTc	CTUh	1.96E-07	3.10E-14	1.06E-11	4.91E-14	5.02E-12	4.91E-14	7.45E-11	1.91E-12	-3.72E-10
Human Toxicity non-cancer	HTnc	CTUh	1.27E-07	6.98E-15	1.62E-12	1.10E-14	8.52E-13	1.10E-14	1.21E-11	3.01E-13	-9.55E-12
Land use	LU	kg C deficit eq.	2.10E+01	3.63E-03	8.63E-01	5.74E-03	1.23E-02	5.74E-03	3.91E-01	4.70E-01	-1.45E+00
Ionising radiation	IR	kBq U235 eq	1.15E+00	7.46E-07	3.21E-02	1.18E-06	3.06E-05	1.18E-06	5.90E-04	2.98E-03	-6.63E-04
Particulate Matter	PM	kg PM2,5-Equiv.	2.85E-02	1.36E-06	9.39E-05	2.14E-06	7.30E-05	2.14E-06	1.14E-03	5.38E-05	-8.59E-03
Resource depletion - water	RDW	m ³	3.22E-01	6.65E-06	1.43E-03	1.05E-05	9.97E-04	1.05E-05	1.48E-02	8.51E-04	-7.76E-03

MetecnoPanel® 100mm

Table 30 | Environmental impacts per m² of MetecnoPanel® 100mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Global warming potential - fossil	GWP - Fossil	kg CO ₂ eq.	6.01E+01	1.46E-03	9.98E-02	1.78E+00	1.39E-01	5.34E-03	2.26E+00	3.28E-01	-7.82E+00
Global warming potential - biogenic	GWP - Biogenic	kg CO ₂ eq.	2.94E-02	7.27E-08	1.76E-01	2.94E-03	4.85E-04	1.27E-07	6.89E-03	2.17E-04	3.50E-03
Global warming potential - land use/ land transformation	GWP - Luluc	kg CO ₂ eq.	2.18E-02	1.21E-08	7.89E-05	5.63E-06	2.87E-08	3.91E-08	8.52E-07	3.63E-05	-8.17E-07
Global warming potential - total	GWP - Total	kg CO₂ eq.	6.02E+01	1.46E-03	2.75E-01	1.78E+00	1.40E-01	5.35E-03	2.26E+00	3.28E-01	-7.82E+00
Ozone depletion potential	ODP	kg CFC 11 eq.	3.41E-06	2.21E-10	8.19E-08	5.04E-08	2.66E-10	2.18E-10	2.20E-08	1.02E-08	-1.58E-08
Acidification potential	AP	mol H ⁺ eq.	2.84E-01	1.15E-05	1.59E-03	9.09E-03	1.02E-03	3.65E-05	1.48E-02	2.96E-04	-7.15E-02
Eutrophication – freshwater	EP - F	kg P eq.	6.03E-03	5.07E-08	-3.38E-05	1.68E-04	5.50E-06	2.01E-07	8.57E-05	5.18E-06	-1.77E-04
Eutrophication – marine	EP - M	kg N eq.	6.94E-02	3.28E-06	2.31E-04	1.55E-03	1.51E-04	1.03E-05	2.38E-03	5.94E-03	-1.43E-02
Eutrophication – terrestrial	EP - T	mol N eq.	6.19E-01	3.59E-05	2.55E-03	1.32E-02	1.62E-03	1.12E-04	2.57E-02	1.08E-03	-1.63E-01
Photochemical ozone creation potential	POCP	kg NMVOC eq.	1.98E-01	8.87E-06	6.74E-04	3.85E-03	4.26E-04	2.77E-05	6.65E-03	3.78E-04	-3.88E-02
Abiotic depletion potential - minerals and metals	ADP	kg Sb eq.	5.36E-04	5.35E-09	3.37E-06	4.06E-06	1.81E-07	2.58E-08	3.05E-06	1.10E-07	-2.29E-06
Abiotic depletion potential - fossil fuels	ADPF	MJ	9.18E+02	2.07E-02	4.00E-01	3.19E+01	6.63E-01	2.72E-02	1.44E+01	8.47E-01	-1.03E+02
Water Depletion Potential	WDP	m ³	2.06E+01	4.34E-04	9.13E-01	3.47E+01	2.28E-02	5.67E-02	1.31E+00	3.41E-02	-5.55E+01

Table 31 | Resource use per m² of MetecnoPanel® 100mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Use of renewable primary energy excluding renewable primary energy resources used as raw materials	PERE	MJ	3.27E+01	2.15E-04	4.65E-01	3.26E-01	1.20E-01	8.64E-04	1.65E+00	1.53E-02	-1.13E+00
Use of renewable primary energy resources used as raw materials	PERM	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	0.00E+00
Primary renewable energy - total	PERT	MJ	3.27E+01	2.15E-04	4.65E-01	3.26E-01	1.20E-01	8.64E-04	1.65E+00	1.53E-02	-1.13E+00
Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials	PENRE	MJ	7.83E+02	2.07E-02	4.92E+00	3.19E+01	6.63E-01	2.72E-02	1.44E+01	8.47E-01	-1.03E+02
Use of non-renewable primary energy resources used as raw materials	PENRM	MJ	1.34E+02	0.00E+00	-2.26E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-1.11E+02	0.00E+00
Primary non renewable energy - total	PENRT	MJ	9.17E+02	2.07E-02	-1.77E+01	3.19E+01	6.63E-01	2.72E-02	1.44E+01	-1.10E+02	-1.03E+02
Use of secondary material	SM	kg	1.22E+00	0.00E+00	1.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of renewable secondary fuels	RSF	MJ	3.70E-14	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of non-renewable secondary fuels	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	0.00E+00
Use of net fresh water	FW	m ³	2.23E-01	2.48E-06	3.32E-04	3.67E-03	1.14E-04	9.48E-06	2.06E-03	4.79E-04	-2.84E-03

Table 32 | Waste generated per m² of MetecnoPanel® 100mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Hazardous waste disposed	HWD	kg	4.02E-04	2.73E-08	-8.30E-06	1.08E-05	4.50E-07	8.51E-08	7.78E-06	1.21E-06	-9.27E-06
Non-hazardous waste disposed	NHWD	kg	2.81E+00	1.44E-04	4.79E-01	6.54E-02	8.58E-03	5.46E-04	2.27E-01	3.38E+00	-1.17E+00
Radioactive waste disposed/stored	RWD	kg	2.26E-03	1.09E-10	3.49E-05	6.94E-06	4.39E-09	3.69E-10	8.46E-08	4.74E-06	-9.56E-08

Table 33 | Output flows per m² of MetecnoPanel® 100mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Components for reuse	CRU	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	0.00E+00
Materials for recycling	MFR	kg	3.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.42E+00	0.00E+00	0.00E+00
Materials for energy recovery	MFRE	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	0.00E+00
Exported energy - electricity	EE - e	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	0.00E+00
Exported energy - thermal	EE - t	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	0.00E+00

Table 34 | Additional environmental impacts per m² of MetecnoPanel® 100mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Global warming potential, excluding biogenic uptake, emissions and storage	GWP-GHG	kg CO ₂ eq	2.50E+01	1.43E-03	1.04E-01	1.68E+00	1.37E-01	5.24E-03	2.23E+00	2.48E-01	-6.74E+00
Particulate matter	PM	disease incidence	2.86E-06	7.54E-11	1.59E-11	8.57E-08	8.88E-09	2.85E-10	1.30E-07	5.63E-09	-4.88E-07
Ionising radiation - human health	IRP	kBq U-235 eq	1.43E+00	7.88E-07	3.35E-02	4.85E-02	3.05E-05	2.58E-06	5.90E-04	3.85E-03	-6.63E-04
Ecotoxicity - freshwater	ETP - fw	CTUe	1.29E+03	1.11E-02	5.98E-01	7.90E+00	3.79E-01	9.14E-02	6.83E+00	1.54E+00	-1.49E+02
Human toxicity potential - cancer effects	HTP - c	CTUh	2.79E-07	3.81E-13	4.38E-09	4.00E-10	2.43E-11	2.10E-12	3.75E-10	2.52E-11	-1.42E-09
Human toxicity potential - non cancer effects	HTP - nc	CTUh	2.74E-06	1.36E-11	2.59E-09	7.25E-09	7.26E-10	8.90E-11	1.17E-08	6.65E-10	-9.77E-08
Soil quality	SQP	Pt	7.53E+01	5.49E-03	1.54E+00	6.96E-01	4.26E-01	2.42E-02	6.15E+00	1.83E+00	-1.24E+01

Table 35 | Environmental impacts per m² of MetecnoPanel® 100mm (results are in accordance with EN15804+A1:2013)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Global warming potential	GWP	kg CO ₂ eq	5.81E+01	1.43E-03	2.01E-01	1.72E+00	1.38E-01	5.25E-03	2.23E+00	2.82E-01	-6.73E+00
Ozone layer depletion	ODP	kg CFC-11 eq	3.26E-06	1.75E-10	7.21E-08	1.73E-10	2.33E-10	1.73E-10	1.80E-08	8.10E-09	-1.26E-08
Acidification potential	AP	kg SO ₂ eq	2.07E-01	6.07E-06	5.65E-04	1.69E-05	2.11E-04	1.69E-05	3.48E-03	2.25E-04	-4.42E-02
Eutrophication potential	EP	kg PO ₄ ³⁻ eq	4.78E-02	1.39E-06	-1.62E-05	4.26E-06	7.30E-05	4.26E-06	1.15E-03	2.52E-03	-6.09E-03
Photochemical ozone creation potential	POCP	kg C ₂ H ₄ eq	3.23E-02	4.08E-07	1.05E-04	1.09E-06	4.31E-06	1.09E-06	8.15E-05	4.96E-05	-1.61E-02
Abiotic depletion potential for non-fossil resources	ADPE	kg Sb eq	5.37E-04	5.35E-09	3.37E-06	2.58E-08	1.81E-07	2.58E-08	3.05E-06	1.11E-07	-2.29E-06
Abiotic depletion potential for fossil resources	ADPF	MJ	8.22E+02	2.08E-02	4.93E+00	7.86E-02	1.55E+00	7.86E-02	2.67E+01	7.99E-01	-1.53E+02

Table 36 | Environmental impacts per m² of MetecnoPanel® 100mm (results are in accordance with Green Star v1.3)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Human Toxicity cancer	HTc	CTUh	2.61E-07	3.22E-14	1.01E-11	5.19E-14	5.02E-12	5.19E-14	7.45E-11	2.48E-12	-3.72E-10
Human Toxicity non-cancer	HTnc	CTUh	1.69E-07	7.23E-15	1.67E-12	1.17E-14	8.52E-13	1.17E-14	1.21E-11	3.88E-13	-9.55E-12
Land use	LU	kg C deficit eq.	2.70E+01	3.76E-03	8.67E-01	6.07E-03	1.23E-02	6.07E-03	3.91E-01	5.91E-01	-1.45E+00
Ionising radiation	IR	kBq U235 eq	1.44E+00	7.73E-07	3.35E-02	1.25E-06	3.06E-05	1.25E-06	5.90E-04	3.85E-03	-6.63E-04
Particulate Matter	PM	kg PM _{2,5} -Equiv.	3.43E-02	1.40E-06	6.79E-05	2.27E-06	7.30E-05	2.27E-06	1.14E-03	6.97E-05	-8.59E-03
Resource depletion - water	RDW	m ³	4.07E-01	6.89E-06	1.28E-03	1.11E-05	9.97E-04	1.11E-05	1.48E-02	1.09E-03	-7.76E-03

MetecnoPanel® 125mm

Table 37 | Environmental impacts per m² of MetecnoPanel® 125mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Global warming potential - fossil	GWP - Fossil	kg CO ₂ eq.	6.29E+01	1.59E-03	7.05E-02	1.78E+00	1.39E-01	5.48E-03	2.26E+00	3.67E-01	-7.82E+00
Global warming potential - biogenic	GWP - Biogenic	kg CO ₂ eq.	3.39E-02	7.90E-08	2.11E-01	2.94E-03	4.85E-04	1.30E-07	6.89E-03	2.43E-04	3.50E-03
Global warming potential - land use/ land transformation	GWP - Luluc	kg CO ₂ eq.	2.41E-02	1.33E-08	8.13E-05	5.63E-06	2.87E-08	4.01E-08	8.52E-07	4.03E-05	-8.17E-07
Global warming potential - total	GWP - Total	kg CO₂ eq.	6.30E+01	1.59E-03	2.81E-01	1.78E+00	1.40E-01	5.48E-03	2.26E+00	3.67E-01	-7.82E+00
Ozone depletion potential	ODP	kg CFC 11 eq.	3.83E-06	2.42E-10	8.17E-08	5.04E-08	2.66E-10	2.23E-10	2.20E-08	1.13E-08	-1.58E-08
Acidification potential	AP	mol H ⁺ eq.	3.00E-01	1.25E-05	1.54E-03	9.09E-03	1.02E-03	3.75E-05	1.48E-02	3.28E-04	-7.15E-02
Eutrophication – freshwater	EP - F	kg P eq.	6.75E-03	5.55E-08	-4.70E-05	1.68E-04	5.50E-06	2.06E-07	8.57E-05	5.76E-06	-1.77E-04
Eutrophication – marine	EP - M	kg N eq.	7.38E-02	3.59E-06	2.22E-04	1.55E-03	1.51E-04	1.06E-05	2.38E-03	6.66E-03	-1.43E-02
Eutrophication – terrestrial	EP - T	mol N eq.	6.49E-01	3.93E-05	2.46E-03	1.32E-02	1.62E-03	1.15E-04	2.57E-02	1.19E-03	-1.63E-01
Photochemical ozone creation potential	POCP	kg NMVOC eq.	2.08E-01	9.71E-06	5.78E-04	3.85E-03	4.26E-04	2.84E-05	6.65E-03	4.19E-04	-3.88E-02
Abiotic depletion potential - minerals and metals	ADP	kg Sb eq.	5.92E-04	5.85E-09	3.59E-06	4.06E-06	1.81E-07	2.65E-08	3.05E-06	1.23E-07	-2.29E-06
Abiotic depletion potential - fossil fuels	ADPF	MJ	9.87E+02	2.26E-02	-6.80E-01	3.19E+01	6.63E-01	2.79E-02	1.44E+01	9.38E-01	-1.03E+02
Water Depletion Potential	WDP	m ³	2.28E+01	4.74E-04	1.08E+00	3.47E+01	2.28E-02	5.82E-02	1.31E+00	3.78E-02	-5.55E+01

Table 38 | Resource use per m² of MetecnoPanel® 125mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Use of renewable primary energy excluding renewable primary energy resources used as raw materials	PERE	MJ	3.45E+01	2.35E-04	5.07E-01	3.26E-01	1.20E-01	8.87E-04	1.65E+00	1.70E-02	-1.13E+00
Use of renewable primary energy resources used as raw materials	PERM	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	0.00E+00
Primary renewable energy - total	PERT	MJ	3.45E+01	2.35E-04	5.07E-01	3.26E-01	1.20E-01	8.87E-04	1.65E+00	1.70E-02	-1.13E+00
Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials	PENRE	MJ	8.34E+02	2.26E-02	4.76E+00	3.19E+01	6.63E-01	2.79E-02	1.44E+01	9.38E-01	-1.03E+02
Use of non-renewable primary energy resources used as raw materials	PENRM	MJ	1.52E+02	0.00E+00	-2.72E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-1.24E+02	0.00E+00
Primary non renewable energy - total	PENRT	MJ	9.86E+02	2.26E-02	-2.24E+01	3.19E+01	6.63E-01	2.79E-02	1.44E+01	-1.23E+02	-1.03E+02
Use of secondary material	SM	kg	1.22E+00	0.00E+00	1.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of renewable secondary fuels	RSF	MJ	3.70E-14	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of non-renewable secondary fuels	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	0.00E+00
Use of net fresh water	FW	m ³	2.44E-01	2.71E-06	2.40E-04	3.67E-03	1.14E-04	9.72E-06	2.06E-03	5.30E-04	-2.84E-03

Table 39 | Waste generated per m² of MetecnoPanel® 125mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Hazardous waste disposed	HWD	kg	4.50E-04	2.99E-08	-1.19E-05	1.08E-05	4.50E-07	8.73E-08	7.78E-06	1.34E-06	-9.27E-06
Non-hazardous waste disposed	NHWD	kg	3.06E+00	1.57E-04	5.72E-01	6.54E-02	8.58E-03	5.60E-04	2.27E-01	3.72E+00	-1.17E+00
Radioactive waste disposed/stored	RWD	kg	2.34E-03	1.19E-10	3.60E-05	6.94E-06	4.39E-09	3.79E-10	8.46E-08	5.24E-06	-9.56E-08

Table 40 | Output flows per m² of MetecnoPanel® 125mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Components for reuse	CRU	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	0.00E+00
Materials for recycling	MFR	kg	3.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.42E+00	0.00E+00	0.00E+00
Materials for energy recovery	MFRE	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	0.00E+00
Exported energy - electricity	EE - e	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	0.00E+00
Exported energy - thermal	EE - t	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	0.00E+00

Table 41 | Additional environmental impacts per m² of MetecnoPanel® 125mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Global warming potential, excluding biogenic uptake, emissions and storage	GWP-GHG	kg CO ₂ eq	2.77E+01	1.56E-03	7.71E-02	1.68E+00	1.37E-01	5.38E-03	2.23E+00	2.77E-01	-6.74E+00
Particulate matter	PM	disease incidence	3.00E-06	8.25E-11	-3.25E-09	8.57E-08	8.88E-09	2.92E-10	1.30E-07	6.23E-09	-4.88E-07
Ionising radiation - human health	IRP	kBq U-235 eq	1.57E+00	8.62E-07	3.60E-02	4.85E-02	3.05E-05	2.65E-06	5.90E-04	4.26E-03	-6.63E-04
Ecotoxicity - freshwater	ETP - fw	CTUe	1.45E+03	1.22E-02	-2.10E-01	7.90E+00	3.79E-01	9.38E-02	6.83E+00	1.72E+00	-1.49E+02
Human toxicity potential - cancer effects	HTP - c	CTUh	3.14E-07	4.16E-13	5.07E-09	4.00E-10	2.43E-11	2.15E-12	3.75E-10	2.80E-11	-1.42E-09
Human toxicity potential - non cancer effects	HTP - nc	CTUh	3.07E-06	1.49E-11	2.54E-09	7.25E-09	7.26E-10	9.13E-11	1.17E-08	7.41E-10	-9.77E-08
Soil quality	SQP	Pt	8.17E+01	6.00E-03	1.60E+00	6.96E-01	4.26E-01	2.48E-02	6.15E+00	2.03E+00	-1.24E+01

Table 42 | Environmental impacts per m² of MetecnoPanel® 125mm (results are in accordance with EN15804+A1:2013)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Global warming potential	GWP	kg CO ₂ eq	6.07E+01	1.56E-03	1.92E-01	1.72E+00	1.38E-01	5.39E-03	2.23E+00	3.15E-01	-6.73E+00
Ozone layer depletion	ODP	kg CFC-11 eq	3.66E-06	1.91E-10	7.17E-08	1.77E-10	2.33E-10	1.77E-10	1.80E-08	8.96E-09	-1.26E-08
Acidification potential	AP	kg SO ₂ eq	2.20E-01	6.64E-06	4.97E-04	1.73E-05	2.11E-04	1.73E-05	3.48E-03	2.50E-04	-4.42E-02
Eutrophication potential	EP	kg PO ₄ ³⁻ eq	5.21E-02	1.52E-06	-5.94E-05	4.37E-06	7.30E-05	4.37E-06	1.15E-03	2.83E-03	-6.09E-03
Photochemical ozone creation potential	POCP	kg C2H4 eq	3.42E-02	4.46E-07	9.00E-05	1.12E-06	4.31E-06	1.12E-06	8.15E-05	5.55E-05	-1.61E-02
Abiotic depletion potential for non-fossil resources	ADPE	kg Sb eq	5.93E-04	5.85E-09	3.59E-06	2.65E-08	1.81E-07	2.65E-08	3.05E-06	1.23E-07	-2.29E-06
Abiotic depletion potential for fossil resources	ADPF	MJ	8.74E+02	2.28E-02	4.65E+00	8.06E-02	1.55E+00	8.06E-02	2.67E+01	8.85E-01	-1.53E+02

Table 43 | Environmental impacts per m² of MetecnoPanel® 125mm (results are in accordance with Green Star v1.3)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Human Toxicity cancer	HTc	CTUh	2.93E-07	3.52E-14	9.38E-12	5.33E-14	5.02E-12	5.33E-14	7.45E-11	2.75E-12	-3.72E-10
Human Toxicity non-cancer	HTnc	CTUh	1.89E-07	7.91E-15	1.74E-12	1.20E-14	8.52E-13	1.20E-14	1.21E-11	4.30E-13	-9.55E-12
Land use	LU	kg C deficit eq.	3.01E+01	4.12E-03	8.74E-01	6.23E-03	1.23E-02	6.23E-03	3.91E-01	6.48E-01	-1.45E+00
Ionising radiation	IR	kBq U235 eq	1.58E+00	8.46E-07	3.60E-02	1.28E-06	3.06E-05	1.28E-06	5.90E-04	4.27E-03	-6.63E-04
Particulate Matter	PM	kg PM2,5-Equiv.	3.73E-02	1.54E-06	2.54E-05	2.33E-06	7.30E-05	2.33E-06	1.14E-03	7.73E-05	-8.59E-03
Resource depletion - water	RDW	m ³	4.54E-01	7.54E-06	1.04E-03	1.14E-05	9.97E-04	1.14E-05	1.48E-02	1.21E-03	-7.76E-03

MetecnoPanel® 150mm

Table 44 | Environmental impacts per m² of MetecnoPanel® 150mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Global warming potential - fossil	GWP - Fossil	kg CO ₂ eq.	7.06E+01	1.68E-03	3.76E-02	1.78E+00	1.39E-01	5.92E-03	2.26E+00	4.90E-01	-7.82E+00
Global warming potential - biogenic	GWP - Biogenic	kg CO ₂ eq.	4.05E-02	8.33E-08	2.50E-01	2.94E-03	4.85E-04	1.40E-07	6.89E-03	3.24E-04	3.50E-03
Global warming potential - land use/ land transformation	GWP - Luluc	kg CO ₂ eq.	3.09E-02	1.40E-08	8.39E-05	5.63E-06	2.87E-08	4.33E-08	8.52E-07	5.29E-05	-8.17E-07
Global warming potential - total	GWP - Total	kg CO₂ eq.	7.07E+01	1.68E-03	2.88E-01	1.78E+00	1.40E-01	5.92E-03	2.26E+00	4.90E-01	-7.82E+00
Ozone depletion potential	ODP	kg CFC 11 eq.	5.09E-06	2.55E-10	8.15E-08	5.04E-08	2.66E-10	2.41E-10	2.20E-08	1.47E-08	-1.58E-08
Acidification potential	AP	mol H ⁺ eq.	3.45E-01	1.32E-05	1.48E-03	9.09E-03	1.02E-03	4.05E-05	1.48E-02	4.29E-04	-7.15E-02
Eutrophication – freshwater	EP - F	kg P eq.	8.92E-03	5.85E-08	-6.17E-05	1.68E-04	5.50E-06	2.23E-07	8.57E-05	7.61E-06	-1.77E-04
Eutrophication – marine	EP - M	kg N eq.	8.65E-02	3.78E-06	2.12E-04	1.55E-03	1.51E-04	1.14E-05	2.38E-03	8.89E-03	-1.43E-02
Eutrophication – terrestrial	EP - T	mol N eq.	7.34E-01	4.14E-05	2.36E-03	1.32E-02	1.62E-03	1.24E-04	2.57E-02	1.56E-03	-1.63E-01
Photochemical ozone creation potential	POCP	kg NMVOC eq.	2.39E-01	1.02E-05	4.70E-04	3.85E-03	4.26E-04	3.07E-05	6.65E-03	5.49E-04	-3.88E-02
Abiotic depletion potential - minerals and metals	ADP	kg Sb eq.	7.62E-04	6.17E-09	3.83E-06	4.06E-06	1.81E-07	2.86E-08	3.05E-06	1.62E-07	-2.29E-06
Abiotic depletion potential - fossil fuels	ADPF	MJ	1.17E+03	2.39E-02	-1.88E+00	3.19E+01	6.63E-01	3.01E-02	1.44E+01	1.22E+00	-1.03E+02
Water Depletion Potential	WDP	m ³	2.82E+01	5.00E-04	1.27E+00	3.47E+01	2.28E-02	6.28E-02	1.31E+00	4.92E-02	-5.55E+01

Table 45 | Resource use per m² of MetecnoPanel® 150mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Use of renewable primary energy excluding renewable primary energy resources used as raw materials	PERE	MJ	3.99E+01	2.47E-04	5.53E-01	3.26E-01	1.20E-01	9.58E-04	1.65E+00	2.25E-02	-1.13E+00
Use of renewable primary energy resources used as raw materials	PERM	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	0.00E+00
Primary renewable energy - total	PERT	MJ	3.99E+01	2.47E-04	5.53E-01	3.26E-01	1.20E-01	9.58E-04	1.65E+00	2.25E-02	-1.13E+00
Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials	PENRE	MJ	9.72E+02	2.39E-02	4.58E+00	3.19E+01	6.63E-01	3.01E-02	1.44E+01	1.22E+00	-1.03E+02
Use of non-renewable primary energy resources used as raw materials	PENRM	MJ	1.99E+02	0.00E+00	-3.23E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-1.66E+02	0.00E+00
Primary non renewable energy - total	PENRT	MJ	1.17E+03	2.39E-02	-2.77E+01	3.19E+01	6.63E-01	3.01E-02	1.44E+01	-1.65E+02	-1.03E+02
Use of secondary material	SM	kg	1.22E+00	0.00E+00	1.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of renewable secondary fuels	RSF	MJ	3.70E-14	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of non-renewable secondary fuels	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	0.00E+00
Use of net fresh water	FW	m ³	3.01E-01	2.86E-06	1.37E-04	3.67E-03	1.14E-04	1.05E-05	2.06E-03	6.89E-04	-2.84E-03

Table 46 | Waste generated per m² of MetecnoPanel® 150mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Hazardous waste disposed	HWD	kg	5.87E-04	3.15E-08	-1.59E-05	1.08E-05	4.50E-07	9.43E-08	7.78E-06	1.74E-06	-9.27E-06
Non-hazardous waste disposed	NHWD	kg	3.77E+00	1.66E-04	6.65E-01	6.54E-02	8.58E-03	6.05E-04	2.27E-01	4.77E+00	-1.17E+00
Radioactive waste disposed/stored	RWD	kg	2.55E-03	1.26E-10	3.72E-05	6.94E-06	4.39E-09	4.09E-10	8.46E-08	6.82E-06	-9.56E-08

Table 47 | Output flows per m² of MetecnoPanel® 150mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Components for reuse	CRU	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	0.00E+00
Materials for recycling	MFR	kg	3.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.42E+00	0.00E+00	0.00E+00
Materials for energy recovery	MFRE	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	0.00E+00
Exported energy - electricity	EE - e	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	0.00E+00
Exported energy - thermal	EE - t	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	0.00E+00

Table 48 | Additional environmental impacts per m² of MetecnoPanel® 150mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Global warming potential, excluding biogenic uptake, emissions and storage	GWP-GHG	kg CO ₂ eq	3.50E+01	1.64E-03	4.65E-02	1.68E+00	1.37E-01	5.81E-03	2.23E+00	3.70E-01	-6.74E+00
Particulate matter	PM	disease incidence	3.36E-06	8.70E-11	-6.89E-09	8.57E-08	8.88E-09	3.16E-10	1.30E-07	8.13E-09	-4.88E-07
Ionising radiation - human health	IRP	kBq U-235 eq	2.00E+00	9.09E-07	3.87E-02	4.85E-02	3.05E-05	2.86E-06	5.90E-04	5.57E-03	-6.63E-04
Ecotoxicity - freshwater	ETP - fw	CTUe	1.92E+03	1.28E-02	-1.12E+00	7.90E+00	3.79E-01	1.01E-01	6.83E+00	2.28E+00	-1.49E+02
Human toxicity potential - cancer effects	HTP - c	CTUh	4.17E-07	4.39E-13	5.84E-09	4.00E-10	2.43E-11	2.32E-12	3.75E-10	3.70E-11	-1.42E-09
Human toxicity potential - non cancer effects	HTP - nc	CTUh	4.08E-06	1.57E-11	2.48E-09	7.25E-09	7.26E-10	9.86E-11	1.17E-08	9.78E-10	-9.77E-08
Soil quality	SQP	Pt	1.01E+02	6.33E-03	1.66E+00	6.96E-01	4.26E-01	2.68E-02	6.15E+00	2.65E+00	-1.24E+01

Table 49 | Environmental impacts per m² of MetecnoPanel® 150mm (results are in accordance with EN15804+A1:2013)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Global warming potential	GWP	kg CO ₂ eq	6.81E+01	1.65E-03	1.83E-01	1.72E+00	1.38E-01	5.82E-03	2.23E+00	4.21E-01	-6.73E+00
Ozone layer depletion	ODP	kg CFC-11 eq	4.86E-06	2.02E-10	7.13E-08	1.91E-10	2.33E-10	1.91E-10	1.80E-08	1.16E-08	-1.26E-08
Acidification potential	AP	kg SO ₂ eq	2.56E-01	7.01E-06	4.19E-04	1.87E-05	2.11E-04	1.87E-05	3.48E-03	3.27E-04	-4.42E-02
Eutrophication potential	EP	kg PO ₄ ³⁻ eq	6.50E-02	1.60E-06	-1.08E-04	4.72E-06	7.30E-05	4.72E-06	1.15E-03	3.78E-03	-6.09E-03
Photochemical ozone creation potential	POCP	kg C2H4 eq	3.98E-02	4.71E-07	7.35E-05	1.21E-06	4.31E-06	1.21E-06	8.15E-05	7.38E-05	-1.61E-02
Abiotic depletion potential for non-fossil resources	ADPE	kg Sb eq	7.62E-04	6.17E-09	3.83E-06	2.86E-08	1.81E-07	2.86E-08	3.05E-06	1.62E-07	-2.29E-06
Abiotic depletion potential for fossil resources	ADPF	MJ	1.02E+03	2.40E-02	4.34E+00	8.71E-02	1.55E+00	8.71E-02	2.67E+01	1.15E+00	-1.53E+02

Table 50 | Environmental impacts per m² of MetecnoPanel® 150mm (results are in accordance with Green Star v1.3)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Human Toxicity cancer	HTc	CTUh	3.89E-07	3.71E-14	8.56E-12	5.75E-14	5.02E-12	5.75E-14	7.45E-11	3.60E-12	-3.72E-10
Human Toxicity non-cancer	HTnc	CTUh	2.52E-07	8.34E-15	1.82E-12	1.29E-14	8.52E-13	1.29E-14	1.21E-11	5.60E-13	-9.55E-12
Land use	LU	kg C deficit eq.	3.92E+01	4.34E-03	8.81E-01	6.73E-03	1.23E-02	6.73E-03	3.91E-01	8.28E-01	-1.45E+00
Ionising radiation	IR	kBq U235 eq	2.01E+00	8.92E-07	3.87E-02	1.38E-06	3.06E-05	1.38E-06	5.90E-04	5.57E-03	-6.63E-04
Particulate Matter	PM	kg PM2,5-Equiv.	4.60E-02	1.62E-06	-2.21E-05	2.51E-06	7.30E-05	2.51E-06	1.14E-03	1.01E-04	-8.59E-03
Resource depletion - water	RDW	m ³	5.83E-01	7.96E-06	7.70E-04	1.23E-05	9.97E-04	1.23E-05	1.48E-02	1.57E-03	-7.76E-03

MetecnoPanel® 200mm

Table 51 | Environmental impacts per m² of MetecnoPanel® 200mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Global warming potential - fossil	GWP - Fossil	kg CO ₂ eq.	8.47E+01	2.21E-03	-5.36E-02	1.78E+00	1.20E-01	6.71E-03	2.26E+00	7.11E-01	-7.82E+00
Global warming potential - biogenic	GWP - Biogenic	kg CO ₂ eq.	5.34E-02	9.45E-08	3.36E-01	2.94E-03	2.51E-04	1.59E-07	6.89E-03	4.70E-04	3.50E-03
Global warming potential - land use/ land transformation	GWP - Luluc	kg CO ₂ eq.	4.33E-02	1.83E-08	1.38E-04	5.63E-06	4.79E-05	4.91E-08	8.52E-07	7.56E-05	-8.17E-07
Global warming potential - total	GWP - Total	kg CO₂ eq.	8.48E+01	2.21E-03	2.82E-01	1.78E+00	1.20E-01	6.71E-03	2.26E+00	7.12E-01	-7.82E+00
Ozone depletion potential	ODP	kg CFC 11 eq.	7.39E-06	3.36E-10	2.77E-07	5.04E-08	1.96E-07	2.73E-10	2.20E-08	2.08E-08	-1.58E-08
Acidification potential	AP	mol H ⁺ eq.	4.27E-01	1.74E-05	1.77E-03	9.09E-03	1.43E-03	4.59E-05	1.48E-02	6.10E-04	-7.15E-02
Eutrophication – freshwater	EP - F	kg P eq.	1.29E-02	7.64E-08	-9.04E-05	1.68E-04	8.97E-06	2.53E-07	8.57E-05	1.09E-05	-1.77E-04
Eutrophication – marine	EP - M	kg N eq.	1.10E-01	4.98E-06	2.21E-04	1.55E-03	1.83E-04	1.29E-05	2.38E-03	1.29E-02	-1.43E-02
Eutrophication – terrestrial	EP - T	mol N eq.	8.92E-01	5.46E-05	2.52E-03	1.32E-02	2.01E-03	1.41E-04	2.57E-02	2.21E-03	-1.63E-01
Photochemical ozone creation potential	POCP	kg NMVOC eq.	2.94E-01	1.35E-05	6.32E-04	3.85E-03	8.22E-04	3.48E-05	6.65E-03	7.85E-04	-3.88E-02
Abiotic depletion potential - minerals and metals	ADP	kg Sb eq.	1.07E-03	7.99E-09	4.33E-06	4.06E-06	1.52E-07	3.24E-08	3.05E-06	2.32E-07	-2.29E-06
Abiotic depletion potential - fossil fuels	ADPF	MJ	1.51E+03	3.14E-02	7.73E+00	3.19E+01	1.29E+01	3.41E-02	1.44E+01	1.74E+00	-1.03E+02
Water Depletion Potential	WDP	m ³	3.87E+01	6.54E-04	1.67E+00	3.47E+01	5.79E-03	7.12E-02	1.31E+00	6.98E-02	-5.55E+01

Table 52 | Resource use per m² of MetecnoPanel® 200mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Use of renewable primary energy excluding renewable primary energy resources used as raw materials	PERE	MJ	4.99E+01	3.19E-04	5.67E-01	3.26E-01	3.12E-02	1.09E-03	1.65E+00	3.25E-02	-1.13E+00
Use of renewable primary energy resources used as raw materials	PERM	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	0.00E+00
Primary renewable energy - total	PERT	MJ	4.99E+01	3.19E-04	5.67E-01	3.26E-01	3.12E-02	1.09E-03	1.65E+00	3.25E-02	-1.13E+00
Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials	PENRE	MJ	1.22E+03	3.14E-02	1.64E+01	3.19E+01	1.29E+01	3.41E-02	1.44E+01	1.74E+00	-1.03E+02
Use of non-renewable primary energy resources used as raw materials	PENRM	MJ	2.86E+02	0.00E+00	4.35E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.42E+02	0.00E+00
Primary non renewable energy - total	PENRT	MJ	1.51E+03	3.14E-02	2.71E+01	3.19E+01	1.29E+01	3.41E-02	1.44E+01	2.40E+02	-1.03E+02
Use of secondary material	SM	kg	1.22E+00	0.00E+00	1.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of renewable secondary fuels	RSF	MJ	3.70E-14	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of non-renewable secondary fuels	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	0.00E+00
Use of net fresh water	FW	m ³	4.07E-01	3.74E-06	-1.22E-04	3.67E-03	7.94E-05	1.19E-05	2.06E-03	9.78E-04	-2.84E-03

Table 53 | Waste generated per m² of MetecnoPanel® 200mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Hazardous waste disposed	HWD	kg	8.40E-04	4.13E-08	7.68E-06	1.08E-05	3.28E-05	1.07E-07	7.78E-06	2.47E-06	-9.27E-06
Non-hazardous waste disposed	NHWD	kg	5.08E+00	2.17E-04	8.66E-01	6.54E-02	6.11E-03	6.86E-04	2.27E-01	6.66E+00	-1.17E+00
Radioactive waste disposed/stored	RWD	kg	2.93E-03	1.64E-10	1.27E-04	6.94E-06	8.69E-05	4.64E-10	8.46E-08	9.66E-06	-9.56E-08

Table 54 | Output flows per m² of MetecnoPanel® 200mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Components for reuse	CRU	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	0.00E+00
Materials for recycling	MFR	kg	3.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.42E+00	0.00E+00	0.00E+00
Materials for energy recovery	MFRE	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	0.00E+00
Exported energy - electricity	EE - e	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	0.00E+00
Exported energy - thermal	EE - t	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	0.00E+00

Table 55 | Additional environmental impacts per m² of MetecnoPanel® 200mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Global warming potential, excluding biogenic uptake, emissions and storage	GWP-GHG	kg CO ₂ eq	4.84E+01	2.16E-03	-4.20E-02	1.68E+00	1.15E-01	6.58E-03	2.23E+00	5.37E-01	-6.74E+00
Particulate matter	PM	disease incidence	4.04E-06	1.14E-10	-1.62E-08	8.57E-08	7.51E-09	3.58E-10	1.30E-07	1.16E-08	-4.88E-07
Ionising radiation - human health	IRP	kBq U-235 eq	2.78E+00	1.19E-06	9.88E-02	4.85E-02	5.43E-02	3.24E-06	5.90E-04	7.92E-03	-6.63E-04
Ecotoxicity - freshwater	ETP - fw	CTUe	2.78E+03	1.69E-02	2.84E+00	7.90E+00	6.33E+00	1.15E-01	6.83E+00	3.29E+00	-1.49E+02
Human toxicity potential - cancer effects	HTP - c	CTUh	6.07E-07	5.73E-13	7.55E-09	4.00E-10	5.13E-11	2.63E-12	3.75E-10	5.32E-11	-1.42E-09
Human toxicity potential - non cancer effects	HTP - nc	CTUh	5.92E-06	2.04E-11	3.04E-09	7.25E-09	1.42E-09	1.12E-10	1.17E-08	1.41E-09	-9.77E-08
Soil quality	SQP	Pt	1.36E+02	8.16E-03	2.85E+00	6.96E-01	1.49E+00	3.03E-02	6.15E+00	3.78E+00	-1.24E+01

Table 56 | Environmental impacts per m² of MetecnoPanel® 200mm (results are in accordance with EN15804+A1:2013)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Global warming potential	GWP	kg CO ₂ eq	8.16E+01	2.17E-03	1.43E-01	1.72E+00	1.17E-01	6.59E-03	2.23E+00	6.11E-01	-6.73E+00
Ozone layer depletion	ODP	kg CFC-11 eq	7.06E-06	2.66E-10	2.25E-07	2.17E-10	1.55E-07	2.17E-10	1.80E-08	1.65E-08	-1.26E-08
Acidification potential	AP	kg SO ₂ eq	3.23E-01	9.22E-06	1.26E-03	2.12E-05	1.22E-03	2.12E-05	3.48E-03	4.65E-04	-4.42E-02
Eutrophication potential	EP	kg PO ₄ ³⁻ eq	8.85E-02	2.11E-06	-1.94E-04	5.35E-06	9.16E-05	5.35E-06	1.15E-03	5.50E-03	-6.09E-03
Photochemical ozone creation potential	POCP	kg C2H4 eq	5.02E-02	6.20E-07	8.31E-05	1.37E-06	4.99E-05	1.37E-06	8.15E-05	1.07E-04	-1.61E-02
Abiotic depletion potential for non-fossil resources	ADPE	kg Sb eq	1.07E-03	7.99E-09	4.33E-06	3.24E-08	1.52E-07	3.24E-08	3.05E-06	2.33E-07	-2.29E-06
Abiotic depletion potential for fossil resources	ADPF	MJ	1.28E+03	3.15E-02	1.40E+01	9.87E-02	1.19E+01	9.87E-02	2.67E+01	1.64E+00	-1.53E+02

Table 57 | Environmental impacts per m² of MetecnoPanel® 200mm (results are in accordance with Green Star v1.3)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Human Toxicity cancer	HTc	CTUh	5.66E-07	4.95E-14	6.80E-12	6.52E-14	5.05E-12	6.52E-14	7.45E-11	5.14E-12	-3.72E-10
Human Toxicity non-cancer	HTnc	CTUh	3.67E-07	1.11E-14	1.71E-12	1.47E-14	5.62E-13	1.47E-14	1.21E-11	7.96E-13	-9.55E-12
Land use	LU	kg C deficit eq.	5.58E+01	5.78E-03	3.00E+00	7.63E-03	2.11E+00	7.63E-03	3.91E-01	1.15E+00	-1.45E+00
Ionising radiation	IR	kBq U235 eq	2.79E+00	1.19E-06	9.89E-02	1.57E-06	5.43E-02	1.57E-06	5.90E-04	7.93E-03	-6.63E-04
Particulate Matter	PM	kg PM2,5-Equiv.	6.20E-02	2.16E-06	-2.63E-05	2.85E-06	1.72E-04	2.85E-06	1.14E-03	1.44E-04	-8.59E-03
Resource depletion - water	RDW	m ³	8.19E-01	1.06E-05	-6.21E-04	1.40E-05	1.91E-04	1.40E-05	1.48E-02	2.23E-03	-7.76E-03

MetecnoInspire®

MetecnoInspire® 50mm

Table 58 | Environmental impacts per m² of MetecnoInspire® 50mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Global warming potential - fossil	GWP - Fossil	kg CO ₂ eq.	5.38E+01	6.09E-04	1.45E-01	1.78E+00	1.39E-01	5.34E-03	2.57E+00	1.63E-01	-8.92E+00
Global warming potential - biogenic	GWP - Biogenic	kg CO ₂ eq.	2.02E-02	2.61E-08	1.22E-01	2.94E-03	4.85E-04	1.26E-07	7.85E-03	1.09E-04	3.98E-03
Global warming potential - land use/ land transformation	GWP - Luluc	kg CO ₂ eq.	1.30E-02	5.04E-09	7.54E-05	5.63E-06	2.87E-08	3.90E-08	9.71E-07	1.97E-05	-9.31E-07
Global warming potential - total	GWP - Total	kg CO₂ eq.	5.38E+01	6.09E-04	2.67E-01	1.78E+00	1.40E-01	5.34E-03	2.58E+00	1.63E-01	-8.91E+00
Ozone depletion potential	ODP	kg CFC 11 eq.	1.72E-06	9.27E-11	8.22E-08	5.04E-08	2.66E-10	2.17E-10	2.51E-08	5.85E-09	-1.80E-08
Acidification potential	AP	mol H ⁺ eq.	2.38E-01	4.80E-06	1.67E-03	9.09E-03	1.02E-03	3.65E-05	1.69E-02	1.65E-04	-8.15E-02
Eutrophication – freshwater	EP - F	kg P eq.	3.12E-03	2.11E-08	-1.37E-05	1.68E-04	5.50E-06	2.01E-07	9.77E-05	2.73E-06	-2.02E-04
Eutrophication – marine	EP - M	kg N eq.	5.56E-02	1.37E-06	2.45E-04	1.55E-03	1.51E-04	1.03E-05	2.71E-03	2.92E-03	-1.63E-02
Eutrophication – terrestrial	EP - T	mol N eq.	5.41E-01	1.51E-05	2.69E-03	1.32E-02	1.62E-03	1.12E-04	2.92E-02	6.02E-04	-1.86E-01
Photochemical ozone creation potential	POCP	kg NMVOC eq.	1.68E-01	3.72E-06	8.20E-04	3.85E-03	4.26E-04	2.77E-05	7.58E-03	2.07E-04	-4.42E-02
Abiotic depletion potential - minerals and metals	ADP	kg Sb eq.	3.11E-04	2.21E-09	3.04E-06	4.06E-06	1.81E-07	2.58E-08	3.48E-06	5.89E-08	-2.61E-06
Abiotic depletion potential - fossil fuels	ADPF	MJ	7.13E+02	8.67E-03	2.04E+00	3.19E+01	6.63E-01	2.72E-02	1.65E+01	4.77E-01	-1.17E+02
Water Depletion Potential	WDP	m ³	1.32E+01	1.81E-04	6.55E-01	3.47E+01	2.28E-02	5.66E-02	1.50E+00	1.93E-02	-6.32E+01

Table 59 | Resource use per m² of MetecnoInspire® 50mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Use of renewable primary energy excluding renewable primary energy resources used as raw materials	PERE	MJ	2.62E+01	8.80E-05	4.02E-01	3.26E-01	1.20E-01	8.64E-04	1.89E+00	7.99E-03	-1.29E+00
Use of renewable primary energy resources used as raw materials	PERM	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	0.00E+00
Primary renewable energy - total	PERT	MJ	2.62E+01	8.80E-05	4.02E-01	3.26E-01	1.20E-01	8.64E-04	1.89E+00	7.99E-03	-1.29E+00
Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials	PENRE	MJ	6.42E+02	8.67E-03	5.17E+00	3.19E+01	6.63E-01	2.72E-02	1.65E+01	4.77E-01	-1.17E+02
Use of non-renewable primary energy resources used as raw materials	PENRM	MJ	7.03E+01	0.00E+00	1.56E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.44E+01	0.00E+00
Primary non renewable energy - total	PENRT	MJ	7.12E+02	8.67E-03	1.05E+01	3.19E+01	6.63E-01	2.72E-02	1.65E+01	5.39E+01	-1.17E+02
Use of secondary material	SM	kg	1.40E+00	0.00E+00	1.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of renewable secondary fuels	RSF	MJ	3.82E-14	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of non-renewable secondary fuels	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	0.00E+00
Use of net fresh water	FW	m ³	1.51E-01	1.03E-06	4.72E-04	3.67E-03	1.14E-04	9.47E-06	2.34E-03	2.71E-04	-3.24E-03

Table 60 | Waste generated per m² of MetecnoInspire® 50mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Hazardous waste disposed	HWD	kg	2.16E-04	1.14E-08	-2.86E-06	1.08E-05	4.50E-07	8.50E-08	8.86E-06	6.79E-07	-1.06E-05
Non-hazardous waste disposed	NHWD	kg	1.88E+00	5.98E-05	3.52E-01	6.54E-02	8.58E-03	5.45E-04	2.59E-01	2.05E+00	-1.34E+00
Radioactive waste disposed/stored	RWD	kg	2.07E-03	4.54E-11	3.33E-05	6.94E-06	4.39E-09	3.69E-10	9.65E-08	2.70E-06	-1.09E-07

Table 61 | Output flows per m² of MetecnoInspire® 50mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Components for reuse	CRU	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	0.00E+00
Materials for recycling	MFR	kg	3.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E+01	0.00E+00	0.00E+00
Materials for energy recovery	MFRE	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	0.00E+00
Exported energy - electricity	EE - e	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	0.00E+00
Exported energy - thermal	EE - t	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	0.00E+00

Table 62 | Additional environmental impacts per m² of MetecnoInspire® 50mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Global warming potential, excluding biogenic uptake, emissions and storage	GWP-GHG	kg CO ₂ eq	1.52E+01	5.96E-04	1.46E-01	1.68E+00	1.37E-01	5.24E-03	2.54E+00	1.24E-01	-7.69E+00
Particulate matter	PM	disease incidence	2.55E-06	3.15E-11	4.97E-09	8.57E-08	8.88E-09	2.85E-10	1.48E-07	3.15E-09	-5.56E-07
Ionising radiation - human health	IRP	kBq U-235 eq	8.70E-01	3.28E-07	2.98E-02	4.85E-02	3.05E-05	2.58E-06	6.72E-04	2.14E-03	-7.55E-04
Ecotoxicity - freshwater	ETP - fw	CTUe	6.54E+02	4.66E-03	1.84E+00	7.90E+00	3.79E-01	9.13E-02	7.78E+00	7.91E-01	-1.70E+02
Human toxicity potential - cancer effects	HTP - c	CTUh	1.40E-07	1.58E-13	3.34E-09	4.00E-10	2.43E-11	2.09E-12	4.28E-10	1.33E-11	-1.62E-09
Human toxicity potential - non cancer effects	HTP - nc	CTUh	1.38E-06	5.64E-12	2.68E-09	7.25E-09	7.26E-10	8.89E-11	1.33E-08	3.50E-10	-1.11E-07
Soil quality	SQP	Pt	5.06E+01	2.25E-03	1.47E+00	6.96E-01	4.26E-01	2.41E-02	7.01E+00	1.02E+00	-1.42E+01

Table 63 | Environmental impacts per m² of MetecnoInspire® 50mm (results are in accordance with EN15804+A1:2013)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Global warming potential	GWP	kg CO ₂ eq	5.20E+01	5.98E-04	2.13E-01	1.72E+00	1.38E-01	5.24E-03	2.54E+00	1.40E-01	-7.67E+00
Ozone layer depletion	ODP	kg CFC-11 eq	1.64E-06	7.33E-11	7.27E-08	1.73E-10	2.33E-10	1.73E-10	2.05E-08	4.63E-09	-1.44E-08
Acidification potential	AP	kg SO ₂ eq	1.70E-01	2.55E-06	6.71E-04	1.69E-05	2.11E-04	1.69E-05	3.97E-03	1.25E-04	-5.04E-02
Eutrophication potential	EP	kg PO ₄ ³⁻ eq	3.17E-02	5.81E-07	4.94E-05	4.26E-06	7.30E-05	4.26E-06	1.31E-03	1.24E-03	-6.94E-03
Photochemical ozone creation potential	POCP	kg C2H4 eq	2.67E-02	1.71E-07	1.27E-04	1.09E-06	4.31E-06	1.09E-06	9.29E-05	2.50E-05	-1.83E-02
Abiotic depletion potential for non-fossil resources	ADPE	kg Sb eq	3.11E-04	2.21E-09	3.04E-06	2.58E-08	1.81E-07	2.58E-08	3.48E-06	5.89E-08	-2.61E-06
Abiotic depletion potential for fossil resources	ADPF	MJ	6.74E+02	8.70E-03	5.36E+00	7.85E-02	1.55E+00	7.85E-02	3.04E+01	4.49E-01	-1.75E+02

Table 64 | Environmental impacts per m² of MetecnoInspire® 50mm (results are in accordance with Green Star v1.3)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Human Toxicity cancer	HTc	CTUh	1.30E-07	1.36E-14	1.12E-11	5.19E-14	5.02E-12	5.19E-14	8.49E-11	1.36E-12	-4.23E-10
Human Toxicity non-cancer	HTnc	CTUh	8.40E-08	3.07E-15	1.56E-12	1.17E-14	8.52E-13	1.17E-14	1.38E-11	2.18E-13	-1.09E-11
Land use	LU	kg C deficit eq.	1.52E+01	1.60E-03	8.57E-01	6.07E-03	1.23E-02	6.07E-03	4.45E-01	3.64E-01	-1.65E+00
Ionising radiation	IR	kBq U235 eq	8.71E-01	3.28E-07	2.99E-02	1.25E-06	3.06E-05	1.25E-06	6.73E-04	2.14E-03	-7.56E-04
Particulate Matter	PM	kg PM2,5-Equiv.	2.35E-02	5.96E-07	1.33E-04	2.26E-06	7.30E-05	2.26E-06	1.30E-03	3.85E-05	-9.79E-03
Resource depletion - water	RDW	m ³	2.36E-01	2.93E-06	1.65E-03	1.11E-05	9.97E-04	1.11E-05	1.68E-02	6.21E-04	-8.85E-03

MetecnoInspire® 60mm

Table 65 | Environmental impacts per m² of MetecnoInspire® 60mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Global warming potential - fossil	GWP - Fossil	kg CO ₂ eq.	5.55E+01	4.80E-04	1.22E-01	1.78E+00	1.39E-01	5.44E-03	2.57E+00	1.90E-01	-8.92E+00
Global warming potential - biogenic	GWP - Biogenic	kg CO ₂ eq.	2.26E-02	1.37E-07	1.49E-01	2.94E-03	4.85E-04	1.29E-07	7.85E-03	1.27E-04	3.98E-03
Global warming potential - land use/ land transformation	GWP - Luluc	kg CO ₂ eq.	1.43E-02	4.60E-09	7.72E-05	5.63E-06	2.87E-08	3.97E-08	9.71E-07	2.25E-05	-9.31E-07
Global warming potential - total	GWP - Total	kg CO₂ eq.	5.55E+01	4.80E-04	2.71E-01	1.78E+00	1.40E-01	5.44E-03	2.58E+00	1.90E-01	-8.91E+00
Ozone depletion potential	ODP	kg CFC 11 eq.	1.96E-06	6.47E-11	8.20E-08	5.04E-08	2.66E-10	2.21E-10	2.51E-08	6.59E-09	-1.80E-08
Acidification potential	AP	mol H ⁺ eq.	2.47E-01	3.64E-06	1.63E-03	9.09E-03	1.02E-03	3.71E-05	1.69E-02	1.87E-04	-8.15E-02
Eutrophication – freshwater	EP - F	kg P eq.	3.53E-03	2.04E-08	-2.38E-05	1.68E-04	5.50E-06	2.05E-07	9.77E-05	3.13E-06	-2.02E-04
Eutrophication – marine	EP - M	kg N eq.	5.82E-02	9.67E-07	2.38E-04	1.55E-03	1.51E-04	1.05E-05	2.71E-03	3.42E-03	-1.63E-02
Eutrophication – terrestrial	EP - T	mol N eq.	5.60E-01	1.06E-05	2.62E-03	1.32E-02	1.62E-03	1.14E-04	2.92E-02	6.82E-04	-1.86E-01
Photochemical ozone creation potential	POCP	kg NMVOC eq.	1.75E-01	2.63E-06	7.47E-04	3.85E-03	4.26E-04	2.82E-05	7.58E-03	2.35E-04	-4.42E-02
Abiotic depletion potential - minerals and metals	ADP	kg Sb eq.	3.43E-04	2.58E-09	3.21E-06	4.06E-06	1.81E-07	2.63E-08	3.48E-06	6.75E-08	-2.61E-06
Abiotic depletion potential - fossil fuels	ADPF	MJ	7.57E+02	6.38E-03	1.22E+00	3.19E+01	6.63E-01	2.76E-02	1.65E+01	5.40E-01	-1.17E+02
Water Depletion Potential	WDP	m ³	1.50E+01	1.60E-04	7.84E-01	3.47E+01	2.28E-02	5.77E-02	1.50E+00	2.19E-02	-6.32E+01

Table 66 | Resource use per m² of MetecnoInspire® 60mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Use of renewable primary energy excluding renewable primary energy resources used as raw materials	PERE	MJ	2.73E+01	1.16E-04	4.34E-01	3.26E-01	1.20E-01	8.79E-04	1.89E+00	9.21E-03	-1.29E+00
Use of renewable primary energy resources used as raw materials	PERM	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	0.00E+00
Primary renewable energy - total	PERT	MJ	2.73E+01	1.16E-04	4.34E-01	3.26E-01	1.20E-01	8.79E-04	1.89E+00	9.21E-03	-1.29E+00
Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials	PENRE	MJ	6.73E+02	6.38E-03	5.04E+00	3.19E+01	6.63E-01	2.76E-02	1.65E+01	5.40E-01	-1.17E+02
Use of non-renewable primary energy resources used as raw materials	PENRM	MJ	8.30E+01	0.00E+00	-1.91E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-6.37E+01	0.00E+00
Primary non renewable energy - total	PENRT	MJ	7.56E+02	6.38E-03	-1.41E+01	3.19E+01	6.63E-01	2.76E-02	1.65E+01	-6.31E+01	-1.17E+02
Use of secondary material	SM	kg	1.40E+00	0.00E+00	1.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of renewable secondary fuels	RSF	MJ	3.82E-14	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of non-renewable secondary fuels	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	0.00E+00
Use of net fresh water	FW	m ³	1.63E-01	8.86E-07	4.02E-04	3.67E-03	1.14E-04	9.64E-06	2.34E-03	3.07E-04	-3.24E-03

Table 67 | Waste generated per m² of MetecnoInspire® 60mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Hazardous waste disposed	HWD	kg	2.48E-04	9.79E-09	-5.58E-06	1.08E-05	4.50E-07	8.65E-08	8.86E-06	7.69E-07	-1.06E-05
Non-hazardous waste disposed	NHWD	kg	2.02E+00	5.38E-05	4.15E-01	6.54E-02	8.58E-03	5.55E-04	2.59E-01	2.28E+00	-1.34E+00
Radioactive waste disposed/stored	RWD	kg	2.11E-03	4.20E-11	3.41E-05	6.94E-06	4.39E-09	3.76E-10	9.65E-08	3.05E-06	-1.09E-07

Table 68 | Output flows per m² of MetecnoInspire® 60mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Components for reuse	CRU	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	0.00E+00
Materials for recycling	MFR	kg	3.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E+01	0.00E+00	0.00E+00
Materials for energy recovery	MFRE	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	0.00E+00
Exported energy - electricity	EE - e	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	0.00E+00
Exported energy - thermal	EE - t	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	0.00E+00

Table 69 | Additional environmental impacts per m² of MetecnoInspire® 60mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Global warming potential, excluding biogenic uptake, emissions and storage	GWP-GHG	kg CO ₂ eq	1.68E+01	4.70E-04	1.25E-01	1.68E+00	1.37E-01	5.33E-03	2.54E+00	1.44E-01	-7.69E+00
Particulate matter	PM	disease incidence	2.63E-06	2.55E-11	2.49E-09	8.57E-08	8.88E-09	2.90E-10	1.48E-07	3.57E-09	-5.56E-07
Ionising radiation - human health	IRP	kBq U-235 eq	9.51E-01	3.01E-07	3.17E-02	4.85E-02	3.05E-05	2.62E-06	6.72E-04	2.43E-03	-7.55E-04
Ecotoxicity - freshwater	ETP - fw	CTUe	7.48E+02	3.61E-03	1.22E+00	7.90E+00	3.79E-01	9.30E-02	7.78E+00	9.14E-01	-1.70E+02
Human toxicity potential - cancer effects	HTP - c	CTUh	1.59E-07	1.54E-13	3.86E-09	4.00E-10	2.43E-11	2.13E-12	4.28E-10	1.53E-11	-1.62E-09
Human toxicity potential - non cancer effects	HTP - nc	CTUh	1.57E-06	5.51E-12	2.64E-09	7.25E-09	7.26E-10	9.05E-11	1.33E-08	4.03E-10	-1.11E-07
Soil quality	SQP	Pt	5.43E+01	2.93E-03	1.51E+00	6.96E-01	4.26E-01	2.46E-02	7.01E+00	1.16E+00	-1.42E+01

Table 70 | Environmental impacts per m² of MetecnoInspire® 60mm (results are in accordance with EN15804+A1:2013)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Global warming potential	GWP	kg CO ₂ eq	5.36E+01	4.71E-04	2.07E-01	1.72E+00	1.38E-01	5.34E-03	2.54E+00	1.63E-01	-7.67E+00
Ozone layer depletion	ODP	kg CFC-11 eq	1.87E-06	5.12E-11	7.24E-08	1.76E-10	2.33E-10	1.76E-10	2.05E-08	5.23E-09	-1.44E-08
Acidification potential	AP	kg SO ₂ eq	1.77E-01	1.82E-06	6.18E-04	1.72E-05	2.11E-04	1.72E-05	3.97E-03	1.42E-04	-5.04E-02
Eutrophication potential	EP	kg PO ₄ ³⁻ eq	3.42E-02	4.28E-07	1.66E-05	4.33E-06	7.30E-05	4.33E-06	1.31E-03	1.45E-03	-6.94E-03
Photochemical ozone creation potential	POCP	kg C2H4 eq	2.78E-02	1.20E-07	1.16E-04	1.11E-06	4.31E-06	1.11E-06	9.29E-05	2.90E-05	-1.83E-02
Abiotic depletion potential for non-fossil resources	ADPE	kg Sb eq	3.43E-04	2.58E-09	3.21E-06	2.63E-08	1.81E-07	2.63E-08	3.48E-06	6.76E-08	-2.61E-06
Abiotic depletion potential for fossil resources	ADPF	MJ	7.08E+02	6.81E-03	5.15E+00	7.99E-02	1.55E+00	7.99E-02	3.04E+01	5.08E-01	-1.75E+02

Table 71 | Environmental impacts per m² of MetecnoInspire® 60mm (results are in accordance with Green Star v1.3)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Human Toxicity cancer	HTc	CTUh	1.48E-07	5.11E-15	1.07E-11	5.28E-14	5.02E-12	5.28E-14	8.49E-11	1.55E-12	-4.23E-10
Human Toxicity non-cancer	HTnc	CTUh	9.59E-08	1.15E-15	1.61E-12	1.19E-14	8.52E-13	1.19E-14	1.38E-11	2.47E-13	-1.09E-11
Land use	LU	kg C deficit eq.	1.70E+01	5.97E-04	8.62E-01	6.18E-03	1.23E-02	6.18E-03	4.45E-01	4.03E-01	-1.65E+00
Ionising radiation	IR	kBq U235 eq	9.53E-01	1.23E-07	3.17E-02	1.27E-06	3.06E-05	1.27E-06	6.73E-04	2.43E-03	-7.56E-04
Particulate Matter	PM	kg PM2,5-Equiv.	2.53E-02	2.23E-07	1.00E-04	2.31E-06	7.30E-05	2.31E-06	1.30E-03	4.38E-05	-9.79E-03
Resource depletion - water	RDW	m ³	2.63E-01	1.09E-06	1.46E-03	1.13E-05	9.97E-04	1.13E-05	1.68E-02	7.01E-04	-8.85E-03

MetecnoInspire® 80mm

Table 72 | Environmental impacts per m² of MetecnoInspire® 80mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Global warming potential - fossil	GWP - Fossil	kg CO ₂ eq.	6.00E+01	6.61E-04	1.11E-01	1.78E+00	1.39E-01	5.69E-03	2.57E+00	2.61E-01	-8.92E+00
Global warming potential - biogenic	GWP - Biogenic	kg CO ₂ eq.	2.57E-02	2.83E-08	1.62E-01	2.94E-03	4.85E-04	1.35E-07	7.85E-03	1.74E-04	3.98E-03
Global warming potential - land use/ land transformation	GWP - Luluc	kg CO ₂ eq.	1.85E-02	5.48E-09	7.81E-05	5.63E-06	2.87E-08	4.16E-08	9.71E-07	2.98E-05	-9.31E-07
Global warming potential - total	GWP - Total	kg CO₂ eq.	6.01E+01	6.61E-04	2.73E-01	1.78E+00	1.40E-01	5.69E-03	2.58E+00	2.61E-01	-8.91E+00
Ozone depletion potential	ODP	kg CFC 11 eq.	2.73E-06	1.01E-10	8.20E-08	5.04E-08	2.66E-10	2.32E-10	2.51E-08	8.55E-09	-1.80E-08
Acidification potential	AP	mol H ⁺ eq.	2.74E-01	5.21E-06	1.61E-03	9.09E-03	1.02E-03	3.89E-05	1.69E-02	2.45E-04	-8.15E-02
Eutrophication – freshwater	EP - F	kg P eq.	4.86E-03	2.29E-08	-2.87E-05	1.68E-04	5.50E-06	2.14E-07	9.77E-05	4.21E-06	-2.02E-04
Eutrophication – marine	EP - M	kg N eq.	6.59E-02	1.49E-06	2.35E-04	1.55E-03	1.51E-04	1.10E-05	2.71E-03	4.72E-03	-1.63E-02
Eutrophication – terrestrial	EP - T	mol N eq.	6.11E-01	1.64E-05	2.58E-03	1.32E-02	1.62E-03	1.20E-04	2.92E-02	8.93E-04	-1.86E-01
Photochemical ozone creation potential	POCP	kg NMVOC eq.	1.93E-01	4.04E-06	7.11E-04	3.85E-03	4.26E-04	2.95E-05	7.58E-03	3.11E-04	-4.42E-02
Abiotic depletion potential - minerals and metals	ADP	kg Sb eq.	4.47E-04	2.40E-09	3.29E-06	4.06E-06	1.81E-07	2.75E-08	3.48E-06	9.02E-08	-2.61E-06
Abiotic depletion potential - fossil fuels	ADPF	MJ	8.63E+02	9.42E-03	8.14E-01	3.19E+01	6.63E-01	2.89E-02	1.65E+01	7.05E-01	-1.17E+02
Water Depletion Potential	WDP	m ³	1.80E+01	1.96E-04	8.48E-01	3.47E+01	2.28E-02	6.04E-02	1.50E+00	2.85E-02	-6.32E+01

Table 73 | Resource use per m² of MetecnoInspire® 80mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Use of renewable primary energy excluding renewable primary energy resources used as raw materials	PERE	MJ	3.06E+01	9.56E-05	4.49E-01	3.26E-01	1.20E-01	9.20E-04	1.89E+00	1.24E-02	-1.29E+00
Use of renewable primary energy resources used as raw materials	PERM	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	0.00E+00
Primary renewable energy - total	PERT	MJ	3.06E+01	9.56E-05	4.49E-01	3.26E-01	1.20E-01	9.20E-04	1.89E+00	1.24E-02	-1.29E+00
Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials	PENRE	MJ	7.53E+02	9.42E-03	4.98E+00	3.19E+01	6.63E-01	2.89E-02	1.65E+01	7.05E-01	-1.17E+02
Use of non-renewable primary energy resources used as raw materials	PENRM	MJ	1.09E+02	0.00E+00	2.08E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.80E+01	0.00E+00
Primary non renewable energy - total	PENRT	MJ	8.62E+02	9.42E-03	1.59E+01	3.19E+01	6.63E-01	2.89E-02	1.65E+01	8.73E+01	-1.17E+02
Use of secondary material	SM	kg	1.40E+00	0.00E+00	1.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of renewable secondary fuels	RSF	MJ	3.82E-14	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of non-renewable secondary fuels	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	0.00E+00
Use of net fresh water	FW	m ³	1.97E-01	1.12E-06	3.67E-04	3.67E-03	1.14E-04	1.01E-05	2.34E-03	3.99E-04	-3.24E-03

Table 74 | Waste generated per m² of MetecnoInspire® 80mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Hazardous waste disposed	HWD	kg	3.30E-04	1.24E-08	-6.93E-06	1.08E-05	4.50E-07	9.06E-08	8.86E-06	1.00E-06	-1.06E-05
Non-hazardous waste disposed	NHWD	kg	2.46E+00	6.50E-05	4.47E-01	6.54E-02	8.58E-03	5.81E-04	2.59E-01	2.89E+00	-1.34E+00
Radioactive waste disposed/stored	RWD	kg	2.24E-03	4.93E-11	3.45E-05	6.94E-06	4.39E-09	3.93E-10	9.65E-08	3.96E-06	-1.09E-07

Table 75 | Output flows per m² of MetecnoInspire® 80mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Components for reuse	CRU	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	0.00E+00
Materials for recycling	MFR	kg	3.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E+01	0.00E+00	0.00E+00
Materials for energy recovery	MFRE	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	0.00E+00
Exported energy - electricity	EE - e	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	0.00E+00
Exported energy - thermal	EE - t	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	0.00E+00

Table 76 | Additional environmental impacts per m² of MetecnoInspire® 80mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Global warming potential, excluding biogenic uptake, emissions and storage	GWP-GHG	kg CO ₂ eq	2.11E+01	6.48E-04	1.15E-01	1.68E+00	1.37E-01	5.58E-03	2.54E+00	1.98E-01	-7.69E+00
Particulate matter	PM	disease incidence	2.84E-06	3.42E-11	1.27E-09	8.57E-08	8.88E-09	3.03E-10	1.48E-07	4.67E-09	-5.56E-07
Ionising radiation - human health	IRP	kBq U-235 eq	1.21E+00	3.56E-07	3.26E-02	4.85E-02	3.05E-05	2.74E-06	6.72E-04	3.19E-03	-7.55E-04
Ecotoxicity - freshwater	ETP - fw	CTUe	1.03E+03	5.06E-03	9.11E-01	7.90E+00	3.79E-01	9.73E-02	7.78E+00	1.24E+00	-1.70E+02
Human toxicity potential - cancer effects	HTP - c	CTUh	2.23E-07	1.72E-13	4.12E-09	4.00E-10	2.43E-11	2.23E-12	4.28E-10	2.05E-11	-1.62E-09
Human toxicity potential - non cancer effects	HTP - nc	CTUh	2.19E-06	6.13E-12	2.62E-09	7.25E-09	7.26E-10	9.47E-11	1.33E-08	5.40E-10	-1.11E-07
Soil quality	SQP	Pt	6.59E+01	2.45E-03	1.52E+00	6.96E-01	4.26E-01	2.57E-02	7.01E+00	1.52E+00	-1.42E+01

Table 77 | Environmental impacts per m² of MetecnoInspire® 80mm (results are in accordance with EN15804+A1:2013)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Global warming potential	GWP	kg CO ₂ eq	5.80E+01	6.49E-04	2.04E-01	1.72E+00	1.38E-01	5.59E-03	2.54E+00	2.25E-01	-7.67E+00
Ozone layer depletion	ODP	kg CFC-11 eq	2.61E-06	7.96E-11	7.23E-08	1.84E-10	2.33E-10	1.84E-10	2.05E-08	6.78E-09	-1.44E-08
Acidification potential	AP	kg SO ₂ eq	1.99E-01	2.77E-06	5.92E-04	1.80E-05	2.11E-04	1.80E-05	3.97E-03	1.87E-04	-5.04E-02
Eutrophication potential	EP	kg PO ₄ ³⁻ eq	4.20E-02	6.31E-07	3.79E-07	4.54E-06	7.30E-05	4.54E-06	1.31E-03	2.00E-03	-6.94E-03
Photochemical ozone creation potential	POCP	kg C ₂ H ₄ eq	3.12E-02	1.86E-07	1.10E-04	1.16E-06	4.31E-06	1.16E-06	9.29E-05	3.97E-05	-1.83E-02
Abiotic depletion potential for non-fossil resources	ADPE	kg Sb eq	4.47E-04	2.40E-09	3.29E-06	2.75E-08	1.81E-07	2.75E-08	3.48E-06	9.02E-08	-2.61E-06
Abiotic depletion potential for fossil resources	ADPF	MJ	7.89E+02	9.45E-03	5.04E+00	8.37E-02	1.55E+00	8.37E-02	3.04E+01	6.64E-01	-1.75E+02

Table 78 | Environmental impacts per m² of MetecnoInspire® 80mm (results are in accordance with Green Star v1.3)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Human Toxicity cancer	HTc	CTUh	2.08E-07	1.48E-14	1.04E-11	5.53E-14	5.02E-12	5.53E-14	8.49E-11	2.04E-12	-4.23E-10
Human Toxicity non-cancer	HTnc	CTUh	1.34E-07	3.33E-15	1.64E-12	1.24E-14	8.52E-13	1.24E-14	1.38E-11	3.23E-13	-1.09E-11
Land use	LU	kg C deficit eq.	2.25E+01	1.73E-03	8.65E-01	6.47E-03	1.23E-02	6.47E-03	4.45E-01	5.08E-01	-1.65E+00
Ionising radiation	IR	kBq U235 eq	1.22E+00	3.56E-07	3.26E-02	1.33E-06	3.06E-05	1.33E-06	6.73E-04	3.19E-03	-7.56E-04
Particulate Matter	PM	kg PM _{2,5} -Equiv.	3.05E-02	6.47E-07	8.43E-05	2.41E-06	7.30E-05	2.41E-06	1.30E-03	5.76E-05	-9.79E-03
Resource depletion - water	RDW	m ³	3.40E-01	3.18E-06	1.37E-03	1.18E-05	9.97E-04	1.18E-05	1.68E-02	9.13E-04	-8.85E-03

MetecnoInspire® 100mm

Table 79 | Environmental impacts per m² of MetecnoInspire® 100mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Global warming potential - fossil	GWP - Fossil	kg CO ₂ eq.	6.40E+01	7.01E-04	1.00E-01	1.78E+00	1.39E-01	5.92E-03	2.57E+00	3.25E-01	-8.92E+00
Global warming potential - biogenic	GWP - Biogenic	kg CO ₂ eq.	2.85E-02	3.00E-08	1.76E-01	2.94E-03	4.85E-04	1.40E-07	7.85E-03	2.16E-04	3.98E-03
Global warming potential - land use/ land transformation	GWP - Luluc	kg CO ₂ eq.	2.21E-02	5.81E-09	7.89E-05	5.63E-06	2.87E-08	4.33E-08	9.71E-07	3.63E-05	-9.31E-07
Global warming potential - total	GWP - Total	kg CO₂ eq.	6.41E+01	7.01E-04	2.76E-01	1.78E+00	1.40E-01	5.92E-03	2.58E+00	3.25E-01	-8.91E+00
Ozone depletion potential	ODP	kg CFC 11 eq.	3.40E-06	1.07E-10	8.19E-08	5.04E-08	2.66E-10	2.41E-10	2.51E-08	1.03E-08	-1.80E-08
Acidification potential	AP	mol H ⁺ eq.	2.97E-01	5.52E-06	1.59E-03	9.09E-03	1.02E-03	4.04E-05	1.69E-02	2.97E-04	-8.15E-02
Eutrophication – freshwater	EP - F	kg P eq.	6.00E-03	2.43E-08	-3.38E-05	1.68E-04	5.50E-06	2.23E-07	9.77E-05	5.16E-06	-2.02E-04
Eutrophication – marine	EP - M	kg N eq.	7.26E-02	1.58E-06	2.32E-04	1.55E-03	1.51E-04	1.14E-05	2.71E-03	5.88E-03	-1.63E-02
Eutrophication – terrestrial	EP - T	mol N eq.	6.55E-01	1.73E-05	2.55E-03	1.32E-02	1.62E-03	1.24E-04	2.92E-02	1.08E-03	-1.86E-01
Photochemical ozone creation potential	POCP	kg NMVOC eq.	2.09E-01	4.28E-06	6.75E-04	3.85E-03	4.26E-04	3.06E-05	7.58E-03	3.79E-04	-4.42E-02
Abiotic depletion potential - minerals and metals	ADP	kg Sb eq.	5.37E-04	2.54E-09	3.37E-06	4.06E-06	1.81E-07	2.86E-08	3.48E-06	1.10E-07	-2.61E-06
Abiotic depletion potential - fossil fuels	ADPF	MJ	9.58E+02	9.98E-03	4.02E-01	3.19E+01	6.63E-01	3.01E-02	1.65E+01	8.53E-01	-1.17E+02
Water Depletion Potential	WDP	m ³	2.07E+01	2.08E-04	9.15E-01	3.47E+01	2.28E-02	6.28E-02	1.50E+00	3.44E-02	-6.32E+01

Table 80 | Resource use per m² of MetecnoInspire® 100mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Use of renewable primary energy excluding renewable primary energy resources used as raw materials	PERE	MJ	3.35E+01	1.01E-04	4.65E-01	3.26E-01	1.20E-01	9.57E-04	1.89E+00	1.52E-02	-1.29E+00
Use of renewable primary energy resources used as raw materials	PERM	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	0.00E+00
Primary renewable energy - total	PERT	MJ	3.35E+01	1.01E-04	4.65E-01	3.26E-01	1.20E-01	9.57E-04	1.89E+00	1.52E-02	-1.29E+00
Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials	PENRE	MJ	8.24E+02	9.98E-03	4.92E+00	3.19E+01	6.63E-01	3.01E-02	1.65E+01	8.53E-01	-1.17E+02
Use of non-renewable primary energy resources used as raw materials	PENRM	MJ	1.33E+02	0.00E+00	2.26E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.10E+02	0.00E+00
Primary non renewable energy - total	PENRT	MJ	9.57E+02	9.98E-03	1.77E+01	3.19E+01	6.63E-01	3.01E-02	1.65E+01	1.09E+02	-1.17E+02
Use of secondary material	SM	kg	1.40E+00	0.00E+00	1.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of renewable secondary fuels	RSF	MJ	3.82E-14	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of non-renewable secondary fuels	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	0.00E+00
Use of net fresh water	FW	m ³	2.27E-01	1.19E-06	3.32E-04	3.67E-03	1.14E-04	1.05E-05	2.34E-03	4.82E-04	-3.24E-03

Table 81 | Waste generated per m² of MetecnoInspire® 100mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Hazardous waste disposed	HWD	kg	4.01E-04	1.31E-08	-8.30E-06	1.08E-05	4.50E-07	9.42E-08	8.86E-06	1.21E-06	-1.06E-05
Non-hazardous waste disposed	NHWD	kg	2.83E+00	6.89E-05	4.89E-01	6.54E-02	8.58E-03	6.04E-04	2.59E-01	3.44E+00	-1.34E+00
Radioactive waste disposed/stored	RWD	kg	2.35E-03	5.22E-11	3.49E-05	6.94E-06	4.39E-09	4.09E-10	9.65E-08	4.78E-06	-1.09E-07

Table 82 | Output flows per m² of MetecnoInspire® 100mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Components for reuse	CRU	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	0.00E+00
Materials for recycling	MFR	kg	3.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E+01	0.00E+00	0.00E+00
Materials for energy recovery	MFRE	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	0.00E+00
Exported energy - electricity	EE - e	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	0.00E+00
Exported energy - thermal	EE - t	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	0.00E+00

Table 83 | Additional environmental impacts per m² of MetecnoInspire® 100mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Global warming potential, excluding biogenic uptake, emissions and storage	GWP-GHG	kg CO ₂ eq	2.49E+01	6.86E-04	1.05E-01	1.68E+00	1.37E-01	5.80E-03	2.54E+00	2.46E-01	-7.69E+00
Particulate matter	PM	disease incidence	3.04E-06	3.63E-11	2.62E-11	8.57E-08	8.88E-09	3.15E-10	1.48E-07	5.66E-09	-5.56E-07
Ionising radiation - human health	IRP	kBq U-235 eq	1.44E+00	3.77E-07	3.35E-02	4.85E-02	3.05E-05	2.85E-06	6.72E-04	3.87E-03	-7.55E-04
Ecotoxicity - freshwater	ETP - fw	CTUe	1.28E+03	5.36E-03	6.07E-01	7.90E+00	3.79E-01	1.01E-01	7.78E+00	1.53E+00	-1.70E+02
Human toxicity potential - cancer effects	HTP - c	CTUh	2.78E-07	1.82E-13	4.38E-09	4.00E-10	2.43E-11	2.32E-12	4.28E-10	2.51E-11	-1.62E-09
Human toxicity potential - non cancer effects	HTP - nc	CTUh	2.72E-06	6.49E-12	2.60E-09	7.25E-09	7.26E-10	9.85E-11	1.33E-08	6.64E-10	-1.11E-07
Soil quality	SQP	Pt	7.59E+01	2.59E-03	1.55E+00	6.96E-01	4.26E-01	2.67E-02	7.01E+00	1.84E+00	-1.42E+01

Table 84 | Environmental impacts per m² of MetecnoInspire® 100mm (results are in accordance with EN15804+A1:2013)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Global warming potential	GWP	kg CO ₂ eq	6.18E+01	6.88E-04	2.01E-01	1.72E+00	1.38E-01	5.81E-03	2.54E+00	2.79E-01	-7.67E+00
Ozone layer depletion	ODP	kg CFC-11 eq	3.24E-06	8.43E-11	7.21E-08	1.91E-10	2.33E-10	1.91E-10	2.05E-08	8.17E-09	-1.44E-08
Acidification potential	AP	kg SO ₂ eq	2.18E-01	2.93E-06	5.66E-04	1.87E-05	2.11E-04	1.87E-05	3.97E-03	2.26E-04	-5.04E-02
Eutrophication potential	EP	kg PO ₄ ³⁻ eq	4.88E-02	6.69E-07	-1.60E-05	4.72E-06	7.30E-05	4.72E-06	1.31E-03	2.50E-03	-6.94E-03
Photochemical ozone creation potential	POCP	kg C2H4 eq	3.42E-02	1.97E-07	1.05E-04	1.21E-06	4.31E-06	1.21E-06	9.29E-05	4.92E-05	-1.83E-02
Abiotic depletion potential for non-fossil resources	ADPE	kg Sb eq	5.37E-04	2.54E-09	3.37E-06	2.86E-08	1.81E-07	2.86E-08	3.48E-06	1.10E-07	-2.61E-06
Abiotic depletion potential for fossil resources	ADPF	MJ	8.62E+02	1.00E-02	4.94E+00	8.70E-02	1.55E+00	8.70E-02	3.04E+01	8.04E-01	-1.75E+02

Table 85 | Environmental impacts per m² of MetecnoInspire® 100mm (results are in accordance with Green Star v1.3)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Human Toxicity cancer	HTc	CTUh	2.59E-07	1.57E-14	1.01E-11	5.75E-14	5.02E-12	5.75E-14	8.49E-11	2.48E-12	-4.23E-10
Human Toxicity non-cancer	HTnc	CTUh	1.68E-07	3.53E-15	1.67E-12	1.29E-14	8.52E-13	1.29E-14	1.38E-11	3.90E-13	-1.09E-11
Land use	LU	kg C deficit eq.	2.73E+01	1.84E-03	8.67E-01	6.72E-03	1.23E-02	6.72E-03	4.45E-01	6.01E-01	-1.65E+00
Ionising radiation	IR	kBq U235 eq	1.44E+00	3.78E-07	3.35E-02	1.38E-06	3.06E-05	1.38E-06	6.73E-04	3.87E-03	-7.56E-04
Particulate Matter	PM	kg PM2,5-Equiv.	3.51E-02	6.86E-07	6.81E-05	2.51E-06	7.30E-05	2.51E-06	1.30E-03	6.99E-05	-9.79E-03
Resource depletion - water	RDW	m ³	4.07E-01	3.37E-06	1.28E-03	1.23E-05	9.97E-04	1.23E-05	1.68E-02	1.10E-03	-8.85E-03

Roofing

MetecnoSpan®

MetecnoSpan® 40mm

Table 86 | Environmental impacts per m² of MetecnoSpan® 40mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Global warming potential - fossil	GWP - Fossil	kg CO ₂ eq.	4.66E+01	1.17E-03	1.06E-01	1.78E+00	1.39E-01	4.58E-03	2.20E+00	1.42E-01	-7.64E+00
Global warming potential - biogenic	GWP - Biogenic	kg CO ₂ eq.	2.97E-02	5.26E-08	1.29E-01	2.94E-03	4.85E-04	1.08E-07	6.72E-03	9.46E-05	3.41E-03
Global warming potential - land use/ land transformation	GWP - Luluc	kg CO ₂ eq.	1.06E-02	9.68E-09	6.21E-05	5.63E-06	2.87E-08	3.35E-08	8.32E-07	1.71E-05	-7.97E-07
Global warming potential - total	GWP - Total	kg CO₂ eq.	4.67E+01	1.17E-03	2.34E-01	1.78E+00	1.40E-01	4.58E-03	2.21E+00	1.42E-01	-7.63E+00
Ozone depletion potential	ODP	kg CFC 11 eq.	1.51E-06	1.77E-10	4.18E-08	5.04E-08	2.66E-10	1.87E-10	2.15E-08	5.06E-09	-1.54E-08
Acidification potential	AP	mol H ⁺ eq.	2.07E-01	9.19E-06	1.36E-03	9.09E-03	1.02E-03	3.13E-05	1.45E-02	1.43E-04	-6.98E-02
Eutrophication – freshwater	EP - F	kg P eq.	2.75E-03	4.05E-08	-2.25E-05	1.68E-04	5.50E-06	1.72E-07	8.36E-05	2.37E-06	-1.73E-04
Eutrophication – marine	EP - M	kg N eq.	4.69E-02	2.63E-06	2.00E-04	1.55E-03	1.51E-04	8.82E-06	2.32E-03	2.54E-03	-1.40E-02
Eutrophication – terrestrial	EP - T	mol N eq.	4.56E-01	2.88E-05	2.20E-03	1.32E-02	1.62E-03	9.63E-05	2.50E-02	5.21E-04	-1.59E-01
Photochemical ozone creation potential	POCP	kg NMVOC eq.	1.40E-01	7.12E-06	5.06E-04	3.85E-03	4.26E-04	2.37E-05	6.49E-03	1.79E-04	-3.78E-02
Abiotic depletion potential - minerals and metals	ADP	kg Sb eq.	2.89E-04	4.24E-09	2.59E-06	4.06E-06	1.81E-07	2.21E-08	2.98E-06	5.11E-08	-2.23E-06
Abiotic depletion potential - fossil fuels	ADPF	MJ	6.00E+02	1.66E-02	-4.77E-01	3.19E+01	6.63E-01	2.33E-02	1.41E+01	4.13E-01	-1.00E+02
Water Depletion Potential	WDP	m ³	1.24E+01	3.46E-04	6.71E-01	3.47E+01	2.28E-02	4.86E-02	1.28E+00	1.68E-02	-5.41E+01

Table 87 | Resource use per m² of MetecnoSpan® 40mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Use of renewable primary energy excluding renewable primary energy resources used as raw materials	PERE	MJ	2.65E+01	1.70E-04	3.92E-01	3.26E-01	1.20E-01	7.41E-04	1.61E+00	6.94E-03	-1.11E+00
Use of renewable primary energy resources used as raw materials	PERM	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	0.00E+00
Primary renewable energy - total	PERT	MJ	2.65E+01	1.70E-04	3.92E-01	3.26E-01	1.20E-01	7.41E-04	1.61E+00	6.94E-03	-1.11E+00
Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials	PENRE	MJ	5.35E+02	1.66E-02	2.84E+00	3.19E+01	6.63E-01	2.33E-02	1.41E+01	4.13E-01	-1.00E+02
Use of non-renewable primary energy resources used as raw materials	PENRM	MJ	6.42E+01	0.00E+00	1.66E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.73E+01	0.00E+00
Primary non renewable energy - total	PENRT	MJ	5.99E+02	1.66E-02	1.38E+01	3.19E+01	6.63E-01	2.33E-02	1.41E+01	4.69E+01	-1.00E+02
Use of secondary material	SM	kg	1.20E+00	0.00E+00	1.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of renewable secondary fuels	RSF	MJ	1.83E-14	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of non-renewable secondary fuels	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	0.00E+00
Use of net fresh water	FW	m ³	1.34E-01	1.98E-06	2.09E-04	3.67E-03	1.14E-04	8.12E-06	2.01E-03	2.35E-04	-2.78E-03

Table 88 | Waste generated per m² of MetecnoSpan® 40mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Hazardous waste disposed	HWD	kg	1.98E-04	2.18E-08	-7.92E-06	1.08E-05	4.50E-07	7.29E-08	7.59E-06	5.88E-07	-9.05E-06
Non-hazardous waste disposed	NHWD	kg	1.78E+00	1.15E-04	3.66E-01	6.54E-02	8.58E-03	4.68E-04	2.22E-01	1.77E+00	-1.14E+00
Radioactive waste disposed/stored	RWD	kg	2.06E-03	8.70E-11	1.92E-05	6.94E-06	4.39E-09	3.17E-10	8.26E-08	2.34E-06	-9.33E-08

Table 89 | Output flows per m² of MetecnoSpan® 40mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Components for reuse	CRU	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	0.00E+00
Materials for recycling	MFR	kg	3.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.20E+00	0.00E+00	0.00E+00
Materials for energy recovery	MFRE	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	0.00E+00
Exported energy - electricity	EE - e	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	0.00E+00
Exported energy - thermal	EE - t	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	0.00E+00

Table 90 | Additional environmental impacts per m² of MetecnoSpan® 40mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Global warming potential, excluding biogenic uptake, emissions and storage	GWP-GHG	kg CO ₂ eq	1.41E+01	1.14E-03	1.09E-01	1.68E+00	1.37E-01	4.49E-03	2.17E+00	1.07E-01	-6.58E+00
Particulate matter	PM	disease incidence	2.20E-06	6.04E-11	2.29E-09	8.57E-08	8.88E-09	2.44E-10	1.27E-07	2.73E-09	-4.76E-07
Ionising radiation - human health	IRP	kBq U-235 eq	8.16E-01	6.29E-07	2.10E-02	4.85E-02	3.05E-05	2.21E-06	5.76E-04	1.86E-03	-6.47E-04
Ecotoxicity - freshwater	ETP - fw	CTUe	5.79E+02	8.92E-03	1.87E-01	7.90E+00	3.79E-01	7.83E-02	6.66E+00	6.87E-01	-1.46E+02
Human toxicity potential - cancer effects	HTP - c	CTUh	1.22E-07	3.04E-13	3.46E-09	4.00E-10	2.43E-11	1.80E-12	3.67E-10	1.15E-11	-1.38E-09
Human toxicity potential - non cancer effects	HTP - nc	CTUh	1.21E-06	1.08E-11	2.10E-09	7.25E-09	7.26E-10	7.63E-11	1.14E-08	3.04E-10	-9.53E-08
Soil quality	SQP	Pt	4.74E+01	4.34E-03	1.16E+00	6.96E-01	4.26E-01	2.07E-02	6.00E+00	8.83E-01	-1.21E+01

Table 91 | Environmental impacts per m² of MetecnoSpan® 40mm (results are in accordance with EN15804+A1:2013)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Global warming potential	GWP	kg CO ₂ eq	4.52E+01	1.14E-03	1.79E-01	1.72E+00	1.38E-01	4.50E-03	2.18E+00	1.22E-01	-6.57E+00
Ozone layer depletion	ODP	kg CFC-11 eq	1.44E-06	1.40E-10	3.65E-08	1.48E-10	2.33E-10	1.48E-10	1.75E-08	4.01E-09	-1.23E-08
Acidification potential	AP	kg SO ₂ eq	1.46E-01	4.87E-06	4.05E-04	1.45E-05	2.11E-04	1.45E-05	3.40E-03	1.09E-04	-4.32E-02
Eutrophication potential	EP	kg PO ₄ ³⁻ eq	2.72E-02	1.11E-06	6.80E-06	3.65E-06	7.30E-05	3.65E-06	1.12E-03	1.08E-03	-5.94E-03
Photochemical ozone creation potential	POCP	kg C2H4 eq	2.15E-02	3.27E-07	4.22E-05	9.35E-07	4.31E-06	9.35E-07	7.95E-05	2.17E-05	-1.57E-02
Abiotic depletion potential for non-fossil resources	ADPE	kg Sb eq	2.89E-04	4.24E-09	2.59E-06	2.21E-08	1.81E-07	2.21E-08	2.98E-06	5.11E-08	-2.23E-06
Abiotic depletion potential for fossil resources	ADPF	MJ	5.69E+02	1.67E-02	3.18E+00	6.74E-02	1.55E+00	6.74E-02	2.60E+01	3.89E-01	-1.50E+02

Table 92 | Environmental impacts per m² of MetecnoSpan® 40mm (results are in accordance with Green Star v1.3)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Human Toxicity cancer	HTc	CTUh	1.14E-07	2.60E-14	8.27E-12	4.45E-14	5.02E-12	4.45E-14	7.27E-11	1.18E-12	-3.63E-10
Human Toxicity non-cancer	HTnc	CTUh	7.34E-08	5.85E-15	1.41E-12	1.00E-14	8.52E-13	1.00E-14	1.18E-11	1.89E-13	-9.32E-12
Land use	LU	kg C deficit eq.	1.28E+01	3.04E-03	4.89E-01	5.20E-03	1.23E-02	5.20E-03	3.82E-01	3.14E-01	-1.42E+00
Ionising radiation	IR	kBq U235 eq	8.17E-01	6.25E-07	2.10E-02	1.07E-06	3.06E-05	1.07E-06	5.76E-04	1.86E-03	-6.47E-04
Particulate Matter	PM	kg PM2,5-Equiv.	2.07E-02	1.14E-06	8.35E-05	1.94E-06	7.30E-05	1.94E-06	1.11E-03	3.34E-05	-8.39E-03
Resource depletion - water	RDW	m ³	2.12E-01	5.58E-06	1.07E-03	9.54E-06	9.97E-04	9.54E-06	1.44E-02	5.38E-04	-7.58E-03

MetecnoSpan® 60mm

Table 93 | Environmental impacts per m² of MetecnoSpan® 60mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Global warming potential - fossil	GWP - Fossil	kg CO ₂ eq.	5.07E+01	1.26E-03	8.94E-02	1.78E+00	1.39E-01	4.81E-03	2.20E+00	2.07E-01	-7.64E+00
Global warming potential - biogenic	GWP - Biogenic	kg CO ₂ eq.	3.33E-02	5.70E-08	1.48E-01	2.94E-03	4.85E-04	1.14E-07	6.72E-03	1.38E-04	3.41E-03
Global warming potential - land use/ land transformation	GWP - Luluc	kg CO ₂ eq.	1.43E-02	1.05E-08	6.34E-05	5.63E-06	2.87E-08	3.52E-08	8.32E-07	2.38E-05	-7.97E-07
Global warming potential - total	GWP - Total	kg CO₂ eq.	5.08E+01	1.26E-03	2.38E-01	1.78E+00	1.40E-01	4.81E-03	2.21E+00	2.07E-01	-7.63E+00
Ozone depletion potential	ODP	kg CFC 11 eq.	2.18E-06	1.92E-10	4.17E-08	5.04E-08	2.66E-10	1.96E-10	2.15E-08	6.86E-09	-1.54E-08
Acidification potential	AP	mol H ⁺ eq.	2.31E-01	9.96E-06	1.33E-03	9.09E-03	1.02E-03	3.29E-05	1.45E-02	1.96E-04	-6.98E-02
Eutrophication – freshwater	EP - F	kg P eq.	3.90E-03	4.39E-08	-2.97E-05	1.68E-04	5.50E-06	1.81E-07	8.36E-05	3.35E-06	-1.73E-04
Eutrophication – marine	EP - M	kg N eq.	5.37E-02	2.85E-06	1.95E-04	1.55E-03	1.51E-04	9.27E-06	2.32E-03	3.73E-03	-1.40E-02
Eutrophication – terrestrial	EP - T	mol N eq.	5.01E-01	3.13E-05	2.15E-03	1.32E-02	1.62E-03	1.01E-04	2.50E-02	7.15E-04	-1.59E-01
Photochemical ozone creation potential	POCP	kg NMVOC eq.	1.57E-01	7.72E-06	4.53E-04	3.85E-03	4.26E-04	2.49E-05	6.49E-03	2.49E-04	-3.78E-02
Abiotic depletion potential - minerals and metals	ADP	kg Sb eq.	3.79E-04	4.60E-09	2.71E-06	4.06E-06	1.81E-07	2.32E-08	2.98E-06	7.19E-08	-2.23E-06
Abiotic depletion potential - fossil fuels	ADPF	MJ	6.98E+02	1.80E-02	-1.07E+00	3.19E+01	6.63E-01	2.45E-02	1.41E+01	5.65E-01	-1.00E+02
Water Depletion Potential	WDP	m ³	1.51E+01	3.75E-04	7.64E-01	3.47E+01	2.28E-02	5.11E-02	1.28E+00	2.28E-02	-5.41E+01

Table 94 | Resource use per m² of MetecnoSpan® 60mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Use of renewable primary energy excluding renewable primary energy resources used as raw materials	PERE	MJ	2.94E+01	1.84E-04	4.15E-01	3.26E-01	1.20E-01	7.79E-04	1.61E+00	9.86E-03	-1.11E+00
Use of renewable primary energy resources used as raw materials	PERM	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	0.00E+00
Primary renewable energy - total	PERT	MJ	2.94E+01	1.84E-04	4.15E-01	3.26E-01	1.20E-01	7.79E-04	1.61E+00	9.86E-03	-1.11E+00
Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials	PENRE	MJ	6.08E+02	1.80E-02	2.75E+00	3.19E+01	6.63E-01	2.45E-02	1.41E+01	5.65E-01	-1.00E+02
Use of non-renewable primary energy resources used as raw materials	PENRM	MJ	8.90E+01	0.00E+00	1.91E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.96E+01	0.00E+00
Primary non renewable energy - total	PENRT	MJ	6.97E+02	1.80E-02	1.64E+01	3.19E+01	6.63E-01	2.45E-02	1.41E+01	6.91E+01	-1.00E+02
Use of secondary material	SM	kg	1.20E+00	0.00E+00	1.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of renewable secondary fuels	RSF	MJ	1.83E-14	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of non-renewable secondary fuels	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	0.00E+00
Use of net fresh water	FW	m ³	1.65E-01	2.15E-06	1.58E-04	3.67E-03	1.14E-04	8.53E-06	2.01E-03	3.20E-04	-2.78E-03

Table 95 | Waste generated per m² of MetecnoSpan® 60mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Hazardous waste disposed	HWD	kg	2.70E-04	2.37E-08	-9.89E-06	1.08E-05	4.50E-07	7.66E-08	7.59E-06	8.04E-07	-9.05E-06
Non-hazardous waste disposed	NHWD	kg	2.16E+00	1.24E-04	4.12E-01	6.54E-02	8.58E-03	4.92E-04	2.22E-01	2.33E+00	-1.14E+00
Radioactive waste disposed/stored	RWD	kg	2.17E-03	9.44E-11	1.98E-05	6.94E-06	4.39E-09	3.33E-10	8.26E-08	3.18E-06	-9.33E-08

Table 96 | Output flows per m² of MetecnoSpan® 60mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Components for reuse	CRU	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	0.00E+00
Materials for recycling	MFR	kg	3.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.20E+00	0.00E+00	0.00E+00
Materials for energy recovery	MFRE	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	0.00E+00
Exported energy - electricity	EE - e	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	0.00E+00
Exported energy - thermal	EE - t	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	0.00E+00

Table 97 | Additional environmental impacts per m² of MetecnoSpan® 60mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Global warming potential, excluding biogenic uptake, emissions and storage	GWP-GHG	kg CO ₂ eq	1.80E+01	1.24E-03	9.36E-02	1.68E+00	1.37E-01	4.72E-03	2.17E+00	1.57E-01	-6.58E+00
Particulate matter	PM	disease incidence	2.40E-06	6.55E-11	4.97E-10	8.57E-08	8.88E-09	2.56E-10	1.27E-07	3.74E-09	-4.76E-07
Ionising radiation - human health	IRP	kBq U-235 eq	1.04E+00	6.82E-07	2.23E-02	4.85E-02	3.05E-05	2.32E-06	5.76E-04	2.55E-03	-6.47E-04
Ecotoxicity - freshwater	ETP - fw	CTUe	8.28E+02	9.67E-03	-2.60E-01	7.90E+00	3.79E-01	8.23E-02	6.66E+00	9.85E-01	-1.46E+02
Human toxicity potential - cancer effects	HTP - c	CTUh	1.77E-07	3.29E-13	3.83E-09	4.00E-10	2.43E-11	1.89E-12	3.67E-10	1.63E-11	-1.38E-09
Human toxicity potential - non cancer effects	HTP - nc	CTUh	1.75E-06	1.17E-11	2.07E-09	7.25E-09	7.26E-10	8.02E-11	1.14E-08	4.30E-10	-9.53E-08
Soil quality	SQP	Pt	5.75E+01	4.71E-03	1.19E+00	6.96E-01	4.26E-01	2.18E-02	6.00E+00	1.21E+00	-1.21E+01

Table 98 | Environmental impacts per m² of MetecnoSpan® 60mm (results are in accordance with EN15804+A1:2013)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Global warming potential	GWP	kg CO ₂ eq	4.91E+01	1.24E-03	1.75E-01	1.72E+00	1.38E-01	4.73E-03	2.18E+00	1.78E-01	-6.57E+00
Ozone layer depletion	ODP	kg CFC-11 eq	2.08E-06	1.52E-10	3.63E-08	1.56E-10	2.33E-10	1.56E-10	1.75E-08	5.44E-09	-1.23E-08
Acidification potential	AP	kg SO ₂ eq	1.65E-01	5.28E-06	3.67E-04	1.52E-05	2.11E-04	1.52E-05	3.40E-03	1.49E-04	-4.32E-02
Eutrophication potential	EP	kg PO ₄ ³⁻ eq	3.40E-02	1.21E-06	-1.70E-05	3.84E-06	7.30E-05	3.84E-06	1.12E-03	1.59E-03	-5.94E-03
Photochemical ozone creation potential	POCP	kg C2H4 eq	2.45E-02	3.55E-07	3.41E-05	9.83E-07	4.31E-06	9.83E-07	7.95E-05	3.15E-05	-1.57E-02
Abiotic depletion potential for non-fossil resources	ADPE	kg Sb eq	3.79E-04	4.60E-09	2.71E-06	2.32E-08	1.81E-07	2.32E-08	2.98E-06	7.19E-08	-2.23E-06
Abiotic depletion potential for fossil resources	ADPF	MJ	6.44E+02	1.81E-02	3.02E+00	7.08E-02	1.55E+00	7.08E-02	2.60E+01	5.32E-01	-1.50E+02

Table 99 | Environmental impacts per m² of MetecnoSpan® 60mm (results are in accordance with Green Star v1.3)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Human Toxicity cancer	HTc	CTUh	1.65E-07	2.82E-14	7.86E-12	4.68E-14	5.02E-12	4.68E-14	7.27E-11	1.63E-12	-3.63E-10
Human Toxicity non-cancer	HTnc	CTUh	1.07E-07	6.34E-15	1.45E-12	1.05E-14	8.52E-13	1.05E-14	1.18E-11	2.59E-13	-9.32E-12
Land use	LU	kg C deficit eq.	1.76E+01	3.30E-03	4.92E-01	5.47E-03	1.23E-02	5.47E-03	3.82E-01	4.10E-01	-1.42E+00
Ionising radiation	IR	kBq U235 eq	1.05E+00	6.78E-07	2.23E-02	1.12E-06	3.06E-05	1.12E-06	5.76E-04	2.55E-03	-6.47E-04
Particulate Matter	PM	kg PM2,5-Equiv.	2.53E-02	1.23E-06	6.01E-05	2.04E-06	7.30E-05	2.04E-06	1.11E-03	4.61E-05	-8.39E-03
Resource depletion - water	RDW	m ³	2.81E-01	6.05E-06	9.34E-04	1.00E-05	9.97E-04	1.00E-05	1.44E-02	7.32E-04	-7.58E-03

MetecnoSpan® 80mm

Table 100 | Environmental impacts per m² of MetecnoSpan® 80mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Global warming potential - fossil	GWP - Fossil	kg CO ₂ eq.	5.47E+01	1.38E-03	7.84E-02	1.78E+00	1.39E-01	5.05E-03	2.20E+00	2.72E-01	-7.64E+00
Global warming potential - biogenic	GWP - Biogenic	kg CO ₂ eq.	3.61E-02	6.24E-08	1.61E-01	2.94E-03	4.85E-04	1.20E-07	6.72E-03	1.80E-04	3.41E-03
Global warming potential - land use/ land transformation	GWP - Luluc	kg CO ₂ eq.	1.79E-02	1.15E-08	6.43E-05	5.63E-06	2.87E-08	3.69E-08	8.32E-07	3.05E-05	-7.97E-07
Global warming potential - total	GWP - Total	kg CO₂ eq.	5.48E+01	1.38E-03	2.40E-01	1.78E+00	1.40E-01	5.05E-03	2.21E+00	2.72E-01	-7.63E+00
Ozone depletion potential	ODP	kg CFC 11 eq.	2.84E-06	2.10E-10	4.16E-08	5.04E-08	2.66E-10	2.05E-10	2.15E-08	8.65E-09	-1.54E-08
Acidification potential	AP	mol H ⁺ eq.	2.54E-01	1.09E-05	1.31E-03	9.09E-03	1.02E-03	3.45E-05	1.45E-02	2.50E-04	-6.98E-02
Eutrophication – freshwater	EP - F	kg P eq.	5.05E-03	4.80E-08	-3.47E-05	1.68E-04	5.50E-06	1.90E-07	8.36E-05	4.33E-06	-1.73E-04
Eutrophication – marine	EP - M	kg N eq.	6.04E-02	3.12E-06	1.92E-04	1.55E-03	1.51E-04	9.72E-06	2.32E-03	4.92E-03	-1.40E-02
Eutrophication – terrestrial	EP - T	mol N eq.	5.45E-01	3.42E-05	2.11E-03	1.32E-02	1.62E-03	1.06E-04	2.50E-02	9.08E-04	-1.59E-01
Photochemical ozone creation potential	POCP	kg NMVOC eq.	1.72E-01	8.45E-06	4.16E-04	3.85E-03	4.26E-04	2.61E-05	6.49E-03	3.18E-04	-3.78E-02
Abiotic depletion potential - minerals and metals	ADP	kg Sb eq.	4.69E-04	5.04E-09	2.79E-06	4.06E-06	1.81E-07	2.44E-08	2.98E-06	9.26E-08	-2.23E-06
Abiotic depletion potential - fossil fuels	ADPF	MJ	7.94E+02	1.97E-02	-1.47E+00	3.19E+01	6.63E-01	2.57E-02	1.41E+01	7.15E-01	-1.00E+02
Water Depletion Potential	WDP	m ³	1.78E+01	4.11E-04	8.28E-01	3.47E+01	2.28E-02	5.35E-02	1.28E+00	2.89E-02	-5.41E+01

Table 101 | Resource use per m² of MetecnoSpan® 80mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Use of renewable primary energy excluding renewable primary energy resources used as raw materials	PERE	MJ	3.23E+01	2.01E-04	4.31E-01	3.26E-01	1.20E-01	8.16E-04	1.61E+00	1.28E-02	-1.11E+00
Use of renewable primary energy resources used as raw materials	PERM	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	0.00E+00
Primary renewable energy - total	PERT	MJ	3.23E+01	2.01E-04	4.31E-01	3.26E-01	1.20E-01	8.16E-04	1.61E+00	1.28E-02	-1.11E+00
Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials	PENRE	MJ	6.80E+02	1.97E-02	2.69E+00	3.19E+01	6.63E-01	2.57E-02	1.41E+01	7.15E-01	-1.00E+02
Use of non-renewable primary energy resources used as raw materials	PENRM	MJ	1.13E+02	0.00E+00	2.08E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.18E+01	0.00E+00
Primary non renewable energy - total	PENRT	MJ	7.93E+02	1.97E-02	1.81E+01	3.19E+01	6.63E-01	2.57E-02	1.41E+01	9.11E+01	-1.00E+02
Use of secondary material	SM	kg	1.20E+00	0.00E+00	1.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of renewable secondary fuels	RSF	MJ	1.83E-14	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of non-renewable secondary fuels	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	0.00E+00
Use of net fresh water	FW	m ³	1.95E-01	2.35E-06	1.24E-04	3.67E-03	1.14E-04	8.95E-06	2.01E-03	4.05E-04	-2.78E-03

Table 102 | Waste generated per m² of MetecnoSpan® 80mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Hazardous waste disposed	HWD	kg	3.41E-04	2.59E-08	-1.12E-05	1.08E-05	4.50E-07	8.03E-08	7.59E-06	1.02E-06	-9.05E-06
Non-hazardous waste disposed	NHWD	kg	2.54E+00	1.36E-04	4.43E-01	6.54E-02	8.58E-03	5.15E-04	2.22E-01	2.89E+00	-1.14E+00
Radioactive waste disposed/stored	RWD	kg	2.28E-03	1.03E-10	2.02E-05	6.94E-06	4.39E-09	3.49E-10	8.26E-08	4.01E-06	-9.33E-08

Table 103 | Output flows per m² of MetecnoSpan® 80mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Components for reuse	CRU	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	0.00E+00
Materials for recycling	MFR	kg	3.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.20E+00	0.00E+00	0.00E+00
Materials for energy recovery	MFRE	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	0.00E+00
Exported energy - electricity	EE - e	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	0.00E+00
Exported energy - thermal	EE - t	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	0.00E+00

Table 104 | Additional environmental impacts per m² of MetecnoSpan® 80mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Global warming potential, excluding biogenic uptake, emissions and storage	GWP-GHG	kg CO ₂ eq	2.18E+01	1.36E-03	8.33E-02	1.68E+00	1.37E-01	4.95E-03	2.17E+00	2.06E-01	-6.58E+00
Particulate matter	PM	disease incidence	2.59E-06	7.17E-11	-7.27E-10	8.57E-08	8.88E-09	2.69E-10	1.27E-07	4.75E-09	-4.76E-07
Ionising radiation - human health	IRP	kBq U-235 eq	1.27E+00	7.47E-07	2.32E-02	4.85E-02	3.05E-05	2.43E-06	5.76E-04	3.24E-03	-6.47E-04
Ecotoxicity - freshwater	ETP - fw	CTUe	1.08E+03	1.06E-02	-5.66E-01	7.90E+00	3.79E-01	8.63E-02	6.66E+00	1.28E+00	-1.46E+02
Human toxicity potential - cancer effects	HTP - c	CTUh	2.32E-07	3.60E-13	4.09E-09	4.00E-10	2.43E-11	1.98E-12	3.67E-10	2.11E-11	-1.38E-09
Human toxicity potential - non cancer effects	HTP - nc	CTUh	2.28E-06	1.29E-11	2.05E-09	7.25E-09	7.26E-10	8.40E-11	1.14E-08	5.56E-10	-9.53E-08
Soil quality	SQP	Pt	6.76E+01	5.15E-03	1.21E+00	6.96E-01	4.26E-01	2.28E-02	6.00E+00	1.54E+00	-1.21E+01

Table 105 | Environmental impacts per m² of MetecnoSpan® 80mm (results are in accordance with EN15804+A1:2013)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Global warming potential	GWP	kg CO ₂ eq	5.29E+01	1.36E-03	1.72E-01	1.72E+00	1.38E-01	4.96E-03	2.18E+00	2.34E-01	-6.57E+00
Ozone layer depletion	ODP	kg CFC-11 eq	2.71E-06	1.66E-10	3.62E-08	1.63E-10	2.33E-10	1.63E-10	1.75E-08	6.86E-09	-1.23E-08
Acidification potential	AP	kg SO ₂ eq	1.84E-01	5.78E-06	3.41E-04	1.59E-05	2.11E-04	1.59E-05	3.40E-03	1.90E-04	-4.32E-02
Eutrophication potential	EP	kg PO ₄ ³⁻ eq	4.08E-02	1.32E-06	-3.32E-05	4.02E-06	7.30E-05	4.02E-06	1.12E-03	2.09E-03	-5.94E-03
Photochemical ozone creation potential	POCP	kg C2H4 eq	2.75E-02	3.89E-07	2.85E-05	1.03E-06	4.31E-06	1.03E-06	7.95E-05	4.12E-05	-1.57E-02
Abiotic depletion potential for non-fossil resources	ADPE	kg Sb eq	4.69E-04	5.04E-09	2.79E-06	2.44E-08	1.81E-07	2.44E-08	2.98E-06	9.26E-08	-2.23E-06
Abiotic depletion potential for fossil resources	ADPF	MJ	7.17E+02	1.98E-02	2.92E+00	7.42E-02	1.55E+00	7.42E-02	2.60E+01	6.75E-01	-1.50E+02

Table 106 | Environmental impacts per m² of MetecnoSpan® 80mm (results are in accordance with Green Star v1.3)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Human Toxicity cancer	HTc	CTUh	2.17E-07	3.09E-14	7.59E-12	4.90E-14	5.02E-12	4.90E-14	7.27E-11	2.08E-12	-3.63E-10
Human Toxicity non-cancer	HTnc	CTUh	1.40E-07	6.94E-15	1.48E-12	1.10E-14	8.52E-13	1.10E-14	1.18E-11	3.28E-13	-9.32E-12
Land use	LU	kg C deficit eq.	2.24E+01	3.61E-03	4.95E-01	5.73E-03	1.23E-02	5.73E-03	3.82E-01	5.06E-01	-1.42E+00
Ionising radiation	IR	kBq U235 eq	1.27E+00	7.42E-07	2.32E-02	1.18E-06	3.06E-05	1.18E-06	5.76E-04	3.25E-03	-6.47E-04
Particulate Matter	PM	kg PM2,5-Equiv.	2.99E-02	1.35E-06	4.41E-05	2.14E-06	7.30E-05	2.14E-06	1.11E-03	5.87E-05	-8.39E-03
Resource depletion - water	RDW	m ³	3.48E-01	6.62E-06	8.44E-04	1.05E-05	9.97E-04	1.05E-05	1.44E-02	9.25E-04	-7.58E-03

MetecnoSpan® 100mm

Table 107 | Environmental impacts per m² of MetecnoSpan® 100mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Global warming potential - fossil	GWP - Fossil	kg CO ₂ eq.	5.87E+01	1.44E-03	6.73E-02	1.78E+00	1.39E-01	5.27E-03	2.20E+00	3.35E-01	-7.64E+00
Global warming potential - biogenic	GWP - Biogenic	kg CO ₂ eq.	3.90E-02	6.49E-08	1.75E-01	2.94E-03	4.85E-04	1.25E-07	6.72E-03	2.22E-04	3.41E-03
Global warming potential - land use/ land transformation	GWP - Luluc	kg CO ₂ eq.	2.14E-02	1.19E-08	6.52E-05	5.63E-06	2.87E-08	3.85E-08	8.32E-07	3.70E-05	-7.97E-07
Global warming potential - total	GWP - Total	kg CO₂ eq.	5.88E+01	1.44E-03	2.42E-01	1.78E+00	1.40E-01	5.27E-03	2.21E+00	3.36E-01	-7.63E+00
Ozone depletion potential	ODP	kg CFC 11 eq.	3.51E-06	2.19E-10	4.16E-08	5.04E-08	2.66E-10	2.15E-10	2.15E-08	1.04E-08	-1.54E-08
Acidification potential	AP	mol H ⁺ eq.	2.78E-01	1.13E-05	1.29E-03	9.09E-03	1.02E-03	3.60E-05	1.45E-02	3.02E-04	-6.98E-02
Eutrophication – freshwater	EP - F	kg P eq.	6.19E-03	4.99E-08	-3.97E-05	1.68E-04	5.50E-06	1.98E-07	8.36E-05	5.28E-06	-1.73E-04
Eutrophication – marine	EP - M	kg N eq.	6.71E-02	3.24E-06	1.88E-04	1.55E-03	1.51E-04	1.02E-05	2.32E-03	6.08E-03	-1.40E-02
Eutrophication – terrestrial	EP - T	mol N eq.	5.90E-01	3.56E-05	2.08E-03	1.32E-02	1.62E-03	1.11E-04	2.50E-02	1.10E-03	-1.59E-01
Photochemical ozone creation potential	POCP	kg NMVOC eq.	1.88E-01	8.78E-06	3.81E-04	3.85E-03	4.26E-04	2.73E-05	6.49E-03	3.85E-04	-3.78E-02
Abiotic depletion potential - minerals and metals	ADP	kg Sb eq.	5.59E-04	5.24E-09	2.87E-06	4.06E-06	1.81E-07	2.55E-08	2.98E-06	1.13E-07	-2.23E-06
Abiotic depletion potential - fossil fuels	ADPF	MJ	8.89E+02	2.05E-02	-1.89E+00	3.19E+01	6.63E-01	2.68E-02	1.41E+01	8.62E-01	-1.00E+02
Water Depletion Potential	WDP	m ³	2.05E+01	4.27E-04	8.95E-01	3.47E+01	2.28E-02	5.59E-02	1.28E+00	3.48E-02	-5.41E+01

Table 108 | Resource use per m² of MetecnoSpan® 100mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Use of renewable primary energy excluding renewable primary energy resources used as raw materials	PERE	MJ	3.52E+01	2.09E-04	4.47E-01	3.26E-01	1.20E-01	8.53E-04	1.61E+00	1.56E-02	-1.11E+00
Use of renewable primary energy resources used as raw materials	PERM	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	0.00E+00
Primary renewable energy - total	PERT	MJ	3.52E+01	2.09E-04	4.47E-01	3.26E-01	1.20E-01	8.53E-04	1.61E+00	1.56E-02	-1.11E+00
Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials	PENRE	MJ	7.51E+02	2.05E-02	2.63E+00	3.19E+01	6.63E-01	2.68E-02	1.41E+01	8.62E-01	-1.00E+02
Use of non-renewable primary energy resources used as raw materials	PENRM	MJ	1.37E+02	0.00E+00	2.26E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E+02	0.00E+00
Primary non renewable energy - total	PENRT	MJ	8.88E+02	2.05E-02	2.00E+01	3.19E+01	6.63E-01	2.68E-02	1.41E+01	1.13E+02	-1.00E+02
Use of secondary material	SM	kg	1.20E+00	0.00E+00	1.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of renewable secondary fuels	RSF	MJ	1.83E-14	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of non-renewable secondary fuels	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	0.00E+00
Use of net fresh water	FW	m ³	2.24E-01	2.44E-06	8.87E-05	3.67E-03	1.14E-04	9.35E-06	2.01E-03	4.87E-04	-2.78E-03

Table 109 | Waste generated per m² of MetecnoSpan® 100mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Hazardous waste disposed	HWD	kg	4.12E-04	2.69E-08	-1.26E-05	1.08E-05	4.50E-07	8.39E-08	7.59E-06	1.23E-06	-9.05E-06
Non-hazardous waste disposed	NHWD	kg	2.91E+00	1.42E-04	4.85E-01	6.54E-02	8.58E-03	5.38E-04	2.22E-01	3.43E+00	-1.14E+00
Radioactive waste disposed/stored	RWD	kg	2.40E-03	1.07E-10	2.06E-05	6.94E-06	4.39E-09	3.64E-10	8.26E-08	4.82E-06	-9.33E-08

Table 110 | Output flows per m² of MetecnoSpan® 100mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Components for reuse	CRU	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	0.00E+00
Materials for recycling	MFR	kg	3.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.20E+00	0.00E+00	0.00E+00
Materials for energy recovery	MFRE	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	0.00E+00
Exported energy - electricity	EE - e	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	0.00E+00
Exported energy - thermal	EE - t	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	0.00E+00

Table 111 | Additional environmental impacts per m² of MetecnoSpan® 100mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Global warming potential, excluding biogenic uptake, emissions and storage	GWP-GHG	kg CO ₂ eq	2.56E+01	1.41E-03	7.30E-02	1.68E+00	1.37E-01	5.17E-03	2.17E+00	2.53E-01	-6.58E+00
Particulate matter	PM	disease incidence	2.79E-06	7.45E-11	-1.97E-09	8.57E-08	8.88E-09	2.81E-10	1.27E-07	5.73E-09	-4.76E-07
Ionising radiation - human health	IRP	kBq U-235 eq	1.50E+00	7.76E-07	2.41E-02	4.85E-02	3.05E-05	2.54E-06	5.76E-04	3.92E-03	-6.47E-04
Ecotoxicity - freshwater	ETP - fw	CTUe	1.32E+03	1.10E-02	-8.70E-01	7.90E+00	3.79E-01	9.02E-02	6.66E+00	1.57E+00	-1.46E+02
Human toxicity potential - cancer effects	HTP - c	CTUh	2.87E-07	3.74E-13	4.36E-09	4.00E-10	2.43E-11	2.07E-12	3.67E-10	2.57E-11	-1.38E-09
Human toxicity potential - non cancer effects	HTP - nc	CTUh	2.82E-06	1.34E-11	2.03E-09	7.25E-09	7.26E-10	8.78E-11	1.14E-08	6.79E-10	-9.53E-08
Soil quality	SQP	Pt	7.76E+01	5.36E-03	1.23E+00	6.96E-01	4.26E-01	2.38E-02	6.00E+00	1.87E+00	-1.21E+01

Table 112 | Environmental impacts per m² of MetecnoSpan® 100mm (results are in accordance with EN15804+A1:2013)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Global warming potential	GWP	kg CO ₂ eq	5.67E+01	1.41E-03	1.69E-01	1.72E+00	1.38E-01	5.18E-03	2.18E+00	2.88E-01	-6.57E+00
Ozone layer depletion	ODP	kg CFC-11 eq	3.35E-06	1.73E-10	3.60E-08	1.70E-10	2.33E-10	1.70E-10	1.75E-08	8.24E-09	-1.23E-08
Acidification potential	AP	kg SO ₂ eq	2.03E-01	6.01E-06	3.15E-04	1.66E-05	2.11E-04	1.66E-05	3.40E-03	2.30E-04	-4.32E-02
Eutrophication potential	EP	kg PO ₄ ³⁻ eq	4.76E-02	1.37E-06	-4.96E-05	4.20E-06	7.30E-05	4.20E-06	1.12E-03	2.58E-03	-5.94E-03
Photochemical ozone creation potential	POCP	kg C2H4 eq	3.05E-02	4.04E-07	2.29E-05	1.08E-06	4.31E-06	1.08E-06	7.95E-05	5.07E-05	-1.57E-02
Abiotic depletion potential for non-fossil resources	ADPE	kg Sb eq	5.59E-04	5.24E-09	2.87E-06	2.55E-08	1.81E-07	2.55E-08	2.98E-06	1.13E-07	-2.23E-06
Abiotic depletion potential for fossil resources	ADPF	MJ	7.89E+02	2.06E-02	2.81E+00	7.75E-02	1.55E+00	7.75E-02	2.60E+01	8.14E-01	-1.50E+02

Table 113 | Environmental impacts per m² of MetecnoSpan® 100mm (results are in accordance with Green Star v1.3)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Human Toxicity cancer	HTc	CTUh	2.68E-07	3.21E-14	7.31E-12	5.12E-14	5.02E-12	5.12E-14	7.27E-11	2.52E-12	-3.63E-10
Human Toxicity non-cancer	HTnc	CTUh	1.73E-07	7.22E-15	1.51E-12	1.15E-14	8.52E-13	1.15E-14	1.18E-11	3.95E-13	-9.32E-12
Land use	LU	kg C deficit eq.	2.72E+01	3.75E-03	4.97E-01	5.99E-03	1.23E-02	5.99E-03	3.82E-01	5.99E-01	-1.42E+00
Ionising radiation	IR	kBq U235 eq	1.50E+00	7.72E-07	2.41E-02	1.23E-06	3.06E-05	1.23E-06	5.76E-04	3.92E-03	-6.47E-04
Particulate Matter	PM	kg PM2,5-Equiv.	3.44E-02	1.40E-06	2.80E-05	2.24E-06	7.30E-05	2.24E-06	1.11E-03	7.10E-05	-8.39E-03
Resource depletion - water	RDW	m ³	4.15E-01	6.88E-06	7.52E-04	1.10E-05	9.97E-04	1.10E-05	1.44E-02	1.11E-03	-7.58E-03

EconoClad®

EconoClad® 25mm

Table 114 | Environmental impacts per m² of EconoClad® 25mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Global warming potential - fossil	GWP - Fossil	kg CO ₂ eq.	2.75E+01	6.11E-04	1.12E-01	1.78E+00	1.39E-01	2.33E-03	1.06E+00	1.04E-01	-3.67E+00
Global warming potential - biogenic	GWP - Biogenic	kg CO ₂ eq.	3.28E-02	2.67E-08	1.21E-01	2.94E-03	4.85E-04	5.53E-08	3.23E-03	6.93E-05	1.64E-03
Global warming potential - land use/ land transformation	GWP - Luluc	kg CO ₂ eq.	6.04E-03	5.07E-09	6.17E-05	5.63E-06	2.87E-08	1.71E-08	4.00E-07	1.19E-05	-3.83E-07
Global warming potential - total	GWP - Total	kg CO₂ eq.	2.75E+01	6.11E-04	2.33E-01	1.78E+00	1.40E-01	2.33E-03	1.06E+00	1.04E-01	-3.67E+00
Ozone depletion potential	ODP	kg CFC 11 eq.	1.11E-06	9.30E-11	4.18E-08	5.04E-08	2.66E-10	9.50E-11	1.03E-08	3.43E-09	-7.42E-09
Acidification potential	AP	mol H ⁺ eq.	1.32E-01	4.82E-06	1.37E-03	9.09E-03	1.02E-03	1.59E-05	6.96E-03	9.83E-05	-3.36E-02
Eutrophication – freshwater	EP - F	kg P eq.	1.85E-03	2.12E-08	-1.97E-05	1.68E-04	5.50E-06	8.78E-08	4.02E-05	1.68E-06	-8.31E-05
Eutrophication – marine	EP - M	kg N eq.	2.83E-02	1.38E-06	2.02E-04	1.55E-03	1.51E-04	4.49E-06	1.12E-03	1.88E-03	-6.74E-03
Eutrophication – terrestrial	EP - T	mol N eq.	2.72E-01	1.51E-05	2.22E-03	1.32E-02	1.62E-03	4.90E-05	1.20E-02	3.58E-04	-7.66E-02
Photochemical ozone creation potential	POCP	kg NMVOC eq.	8.23E-02	3.74E-06	5.26E-04	3.85E-03	4.26E-04	1.21E-05	3.12E-03	1.25E-04	-1.82E-02
Abiotic depletion potential - minerals and metals	ADP	kg Sb eq.	1.83E-04	2.22E-09	2.54E-06	4.06E-06	1.81E-07	1.13E-08	1.43E-06	3.61E-08	-1.08E-06
Abiotic depletion potential - fossil fuels	ADPF	MJ	3.51E+02	8.71E-03	-2.52E-01	3.19E+01	6.63E-01	1.19E-02	6.79E+00	2.83E-01	-4.82E+01
Water Depletion Potential	WDP	m ³	9.10E+00	1.81E-04	6.36E-01	3.47E+01	2.28E-02	2.47E-02	6.17E-01	1.14E-02	-2.60E+01

Table 115 | Resource use per m² of EconoClad® 25mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Use of renewable primary energy excluding renewable primary energy resources used as raw materials	PERE	MJ	1.74E+01	8.86E-05	3.84E-01	3.26E-01	1.20E-01	3.77E-04	7.77E-01	4.96E-03	-5.32E-01
Use of renewable primary energy resources used as raw materials	PERM	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	0.00E+00
Primary renewable energy - total	PERT	MJ	1.74E+01	8.86E-05	3.84E-01	3.26E-01	1.20E-01	3.77E-04	7.77E-01	4.96E-03	-5.32E-01
Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials	PENRE	MJ	3.04E+02	8.71E-03	2.88E+00	3.19E+01	6.63E-01	1.19E-02	6.79E+00	2.83E-01	-4.82E+01
Use of non-renewable primary energy resources used as raw materials	PENRM	MJ	4.56E+01	0.00E+00	1.56E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.51E+01	0.00E+00
Primary non renewable energy - total	PENRT	MJ	3.50E+02	8.71E-03	1.28E+01	3.19E+01	6.63E-01	1.19E-02	6.79E+00	3.48E+01	-4.82E+01
Use of secondary material	SM	kg	5.75E-01	0.00E+00	1.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of renewable secondary fuels	RSF	MJ	-1.40E-20	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of non-renewable secondary fuels	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	0.00E+00
Use of net fresh water	FW	m ³	8.27E-02	1.04E-06	2.28E-04	3.67E-03	1.14E-04	4.14E-06	9.66E-04	1.60E-04	-1.34E-03

Table 116 | Waste generated per m² of EconoClad® 25mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Hazardous waste disposed	HWD	kg	1.55E-04	1.14E-08	-7.17E-06	1.08E-05	4.50E-07	3.71E-08	3.65E-06	4.03E-07	-4.35E-06
Non-hazardous waste disposed	NHWD	kg	1.31E+00	6.01E-05	3.48E-01	6.54E-02	8.58E-03	2.38E-04	1.07E-01	1.16E+00	-5.51E-01
Radioactive waste disposed/stored	RWD	kg	1.13E-03	4.56E-11	1.90E-05	6.94E-06	4.39E-09	1.61E-10	3.98E-08	1.59E-06	-4.49E-08

Table 117 | Output flows per m2 of EconoClad® 25mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Components for reuse	CRU	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	0.00E+00
Materials for recycling	MFR	kg	3.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.42E+00	0.00E+00	0.00E+00
Materials for energy recovery	MFRE	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	0.00E+00
Exported energy - electricity	EE - e	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	0.00E+00
Exported energy - thermal	EE - t	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	0.00E+00

Table 118 | Additional environmental impacts per m² of EconoClad® 25mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Global warming potential, excluding biogenic uptake, emissions and storage	GWP-GHG	kg CO ₂ eq	1.19E+01	5.99E-04	1.14E-01	1.68E+00	1.37E-01	2.29E-03	1.05E+00	7.89E-02	-3.17E+00
Particulate matter	PM	disease incidence	1.36E-06	3.17E-11	2.97E-09	8.57E-08	8.88E-09	1.24E-10	6.09E-08	1.87E-09	-2.29E-07
Ionising radiation - human health	IRP	kBq U-235 eq	4.96E-01	3.29E-07	2.05E-02	4.85E-02	3.05E-05	1.13E-06	2.77E-04	1.28E-03	-3.11E-04
Ecotoxicity - freshwater	ETP - fw	CTUe	3.87E+02	4.68E-03	3.58E-01	7.90E+00	3.79E-01	3.99E-02	3.21E+00	4.95E-01	-7.01E+01
Human toxicity potential - cancer effects	HTP - c	CTUh	7.86E-08	1.59E-13	3.31E-09	4.00E-10	2.43E-11	9.15E-13	1.76E-10	8.18E-12	-6.66E-10
Human toxicity potential - non cancer effects	HTP - nc	CTUh	7.94E-07	5.67E-12	2.11E-09	7.25E-09	7.26E-10	3.88E-11	5.49E-09	2.16E-10	-4.59E-08
Soil quality	SQP	Pt	3.79E+01	2.27E-03	1.15E+00	6.96E-01	4.26E-01	1.05E-02	2.89E+00	6.08E-01	-5.84E+00

Table 119 | Environmental impacts per m² of EconoClad® 25mm (results are in accordance with EN15804+A1:2013)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Global warming potential	GWP	kg CO ₂ eq	2.67E+01	6.00E-04	1.81E-01	1.72E+00	1.38E-01	2.29E-03	1.05E+00	8.96E-02	-3.16E+00
Ozone layer depletion	ODP	kg CFC-11 eq	1.04E-06	7.36E-11	3.66E-08	7.54E-11	2.33E-10	7.54E-11	8.44E-09	2.72E-09	-5.94E-09
Acidification potential	AP	kg SO ₂ eq	8.37E-02	2.56E-06	4.20E-04	7.36E-06	2.11E-04	7.36E-06	1.64E-03	7.48E-05	-2.08E-02
Eutrophication potential	EP	kg PO ₄ ³⁻ eq	1.72E-02	5.84E-07	1.58E-05	1.86E-06	7.30E-05	1.86E-06	5.39E-04	7.99E-04	-2.86E-03
Photochemical ozone creation potential	POCP	kg C2H4 eq	1.10E-02	1.72E-07	4.53E-05	4.76E-07	4.31E-06	4.76E-07	3.83E-05	1.58E-05	-7.54E-03
Abiotic depletion potential for non-fossil resources	ADPE	kg Sb eq	1.83E-04	2.22E-09	2.54E-06	1.13E-08	1.81E-07	1.13E-08	1.43E-06	3.61E-08	-1.08E-06
Abiotic depletion potential for fossil resources	ADPF	MJ	3.40E+02	8.74E-03	3.24E+00	3.43E-02	1.55E+00	3.43E-02	1.25E+01	2.66E-01	-7.20E+01

Table 120 | Environmental impacts per m² of EconoClad® 25mm (results are in accordance with Green Star v1.3)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Human Toxicity cancer	HTc	CTUh	7.27E-08	1.37E-14	8.42E-12	2.27E-14	5.02E-12	2.27E-14	3.50E-11	8.18E-13	-1.74E-10
Human Toxicity non-cancer	HTnc	CTUh	4.68E-08	3.08E-15	1.40E-12	5.09E-15	8.52E-13	5.09E-15	5.68E-12	1.29E-13	-4.48E-12
Land use	LU	kg C deficit eq.	1.11E+01	1.60E-03	4.87E-01	2.65E-03	1.23E-02	2.65E-03	1.84E-01	2.04E-01	-6.81E-01
Ionising radiation	IR	kBq U235 eq	4.97E-01	3.29E-07	2.05E-02	5.45E-07	3.06E-05	5.45E-07	2.77E-04	1.28E-03	-3.11E-04
Particulate Matter	PM	kg PM2,5-Equiv.	1.37E-02	5.98E-07	9.24E-05	9.89E-07	7.30E-05	9.89E-07	5.35E-04	2.31E-05	-4.03E-03
Resource depletion - water	RDW	m ³	1.56E-01	2.93E-06	1.12E-03	4.86E-06	9.97E-04	4.86E-06	6.93E-03	3.66E-04	-3.65E-03

EconoClad® 40mm

Table 121 | Environmental impacts per m² of EconoClad® 40mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Global warming potential - fossil	GWP - Fossil	kg CO ₂ eq.	3.07E+01	6.88E-04	1.00E-01	1.78E+00	1.39E-01	2.52E-03	1.06E+00	1.56E-01	-3.67E+00
Global warming potential - biogenic	GWP - Biogenic	kg CO ₂ eq.	3.52E-02	3.00E-08	1.35E-01	2.94E-03	4.85E-04	5.96E-08	3.23E-03	1.03E-04	1.64E-03
Global warming potential - land use/ land transformation	GWP - Luluc	kg CO ₂ eq.	8.90E-03	5.70E-09	6.25E-05	5.63E-06	2.87E-08	1.84E-08	4.00E-07	1.72E-05	-3.83E-07
Global warming potential - total	GWP - Total	kg CO₂ eq.	3.07E+01	6.88E-04	2.35E-01	1.78E+00	1.40E-01	2.52E-03	1.06E+00	1.56E-01	-3.67E+00
Ozone depletion potential	ODP	kg CFC 11 eq.	1.64E-06	1.05E-10	4.18E-08	5.04E-08	2.66E-10	1.02E-10	1.03E-08	4.85E-09	-7.42E-09
Acidification potential	AP	mol H ⁺ eq.	1.51E-01	5.42E-06	1.35E-03	9.09E-03	1.02E-03	1.72E-05	6.96E-03	1.41E-04	-3.36E-02
Eutrophication – freshwater	EP - F	kg P eq.	2.77E-03	2.38E-08	-2.48E-05	1.68E-04	5.50E-06	9.47E-08	4.02E-05	2.46E-06	-8.31E-05
Eutrophication – marine	EP - M	kg N eq.	3.36E-02	1.55E-06	1.99E-04	1.55E-03	1.51E-04	4.85E-06	1.12E-03	2.82E-03	-6.74E-03
Eutrophication – terrestrial	EP - T	mol N eq.	3.08E-01	1.70E-05	2.18E-03	1.32E-02	1.62E-03	5.29E-05	1.20E-02	5.11E-04	-7.66E-02
Photochemical ozone creation potential	POCP	kg NMVOC eq.	9.49E-02	4.20E-06	4.89E-04	3.85E-03	4.26E-04	1.30E-05	3.12E-03	1.79E-04	-1.82E-02
Abiotic depletion potential - minerals and metals	ADP	kg Sb eq.	2.54E-04	2.50E-09	2.62E-06	4.06E-06	1.81E-07	1.22E-08	1.43E-06	5.25E-08	-1.08E-06
Abiotic depletion potential - fossil fuels	ADPF	MJ	4.27E+02	9.79E-03	-6.66E-01	3.19E+01	6.63E-01	1.28E-02	6.79E+00	4.02E-01	-4.82E+01
Water Depletion Potential	WDP	m ³	1.14E+01	2.04E-04	7.01E-01	3.47E+01	2.28E-02	2.67E-02	6.17E-01	1.62E-02	-2.60E+01

Table 122 | Resource use per m² of EconoClad® 40mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Use of renewable primary energy excluding renewable primary energy resources used as raw materials	PERE	MJ	1.97E+01	9.97E-05	4.00E-01	3.26E-01	1.20E-01	4.07E-04	7.77E-01	7.26E-03	-5.32E-01
Use of renewable primary energy resources used as raw materials	PERM	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	0.00E+00
Primary renewable energy - total	PERT	MJ	1.97E+01	9.97E-05	4.00E-01	3.26E-01	1.20E-01	4.07E-04	7.77E-01	7.26E-03	-5.32E-01
Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials	PENRE	MJ	3.61E+02	9.79E-03	2.81E+00	3.19E+01	6.63E-01	1.28E-02	6.79E+00	4.02E-01	-4.82E+01
Use of non-renewable primary energy resources used as raw materials	PENRM	MJ	6.50E+01	0.00E+00	-1.74E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-5.27E+01	0.00E+00
Primary non renewable energy - total	PENRT	MJ	4.26E+02	9.79E-03	-1.46E+01	3.19E+01	6.63E-01	1.28E-02	6.79E+00	-5.23E+01	-4.82E+01
Use of secondary material	SM	kg	5.75E-01	0.00E+00	1.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of renewable secondary fuels	RSF	MJ	-1.40E-20	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of non-renewable secondary fuels	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	0.00E+00
Use of net fresh water	FW	m ³	1.07E-01	1.17E-06	1.93E-04	3.67E-03	1.14E-04	4.46E-06	9.66E-04	2.27E-04	-1.34E-03

Table 123 | Waste generated per m² of EconoClad® 40mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Hazardous waste disposed	HWD	kg	2.12E-04	1.29E-08	-8.54E-06	1.08E-05	4.50E-07	4.01E-08	3.65E-06	5.73E-07	-4.35E-06
Non-hazardous waste disposed	NHWD	kg	1.62E+00	6.76E-05	3.80E-01	6.54E-02	8.58E-03	2.57E-04	1.07E-01	1.60E+00	-5.51E-01
Radioactive waste disposed/stored	RWD	kg	1.22E-03	5.13E-11	1.94E-05	6.94E-06	4.39E-09	1.74E-10	3.98E-08	2.25E-06	-4.49E-08

Table 124 | Output flows per m² of EconoClad[®] 40mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Components for reuse	CRU	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	0.00E+00
Materials for recycling	MFR	kg	3.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.42E+00	0.00E+00	0.00E+00
Materials for energy recovery	MFRE	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	0.00E+00
Exported energy - electricity	EE - e	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	0.00E+00
Exported energy - thermal	EE - t	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	0.00E+00

Table 125 | Additional environmental impacts per m² of EconoClad[®] 40mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Global warming potential, excluding biogenic uptake, emissions and storage	GWP-GHG	kg CO ₂ eq	1.49E+01	6.74E-04	1.04E-01	1.68E+00	1.37E-01	2.47E-03	1.05E+00	1.18E-01	-3.17E+00
Particulate matter	PM	disease incidence	1.51E-06	3.56E-11	1.72E-09	8.57E-08	8.88E-09	1.34E-10	6.09E-08	2.67E-09	-2.29E-07
Ionising radiation - human health	IRP	kBq U-235 eq	6.77E-01	3.71E-07	2.14E-02	4.85E-02	3.05E-05	1.21E-06	2.77E-04	1.83E-03	-3.11E-04
Ecotoxicity - freshwater	ETP - fw	CTUe	5.86E+02	5.26E-03	4.53E-02	7.90E+00	3.79E-01	4.30E-02	3.21E+00	7.31E-01	-7.01E+01
Human toxicity potential - cancer effects	HTP - c	CTUh	1.22E-07	1.79E-13	3.58E-09	4.00E-10	2.43E-11	9.87E-13	1.76E-10	1.20E-11	-6.66E-10
Human toxicity potential - non cancer effects	HTP - nc	CTUh	1.22E-06	6.38E-12	2.09E-09	7.25E-09	7.26E-10	4.19E-11	5.49E-09	3.16E-10	-4.59E-08
Soil quality	SQP	Pt	4.59E+01	2.55E-03	1.17E+00	6.96E-01	4.26E-01	1.14E-02	2.89E+00	8.70E-01	-5.84E+00

Table 126 | Environmental impacts per m² of EconoClad[®] 40mm (results are in accordance with EN15804+A1:2013)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Global warming potential	GWP	kg CO ₂ eq	2.98E+01	6.75E-04	1.78E-01	1.72E+00	1.38E-01	2.47E-03	1.05E+00	1.34E-01	-3.16E+00
Ozone layer depletion	ODP	kg CFC-11 eq	1.54E-06	8.28E-11	3.65E-08	8.13E-11	2.33E-10	8.13E-11	8.44E-09	3.85E-09	-5.94E-09
Acidification potential	AP	kg SO ₂ eq	9.89E-02	2.88E-06	3.93E-04	7.94E-06	2.11E-04	7.94E-06	1.64E-03	1.07E-04	-2.08E-02
Eutrophication potential	EP	kg PO ₄ ³⁻ eq	2.26E-02	6.56E-07	-7.47E-07	2.01E-06	7.30E-05	2.01E-06	5.39E-04	1.20E-03	-2.86E-03
Photochemical ozone creation potential	POCP	kg C ₂ H ₄ eq	1.34E-02	1.93E-07	3.96E-05	5.14E-07	4.31E-06	5.14E-07	3.83E-05	2.36E-05	-7.54E-03
Abiotic depletion potential for non-fossil resources	ADPE	kg Sb eq	2.54E-04	2.50E-09	2.63E-06	1.22E-08	1.81E-07	1.22E-08	1.43E-06	5.25E-08	-1.08E-06
Abiotic depletion potential for fossil resources	ADPF	MJ	3.99E+02	9.83E-03	3.13E+00	3.70E-02	1.55E+00	3.70E-02	1.25E+01	3.79E-01	-7.20E+01

Table 127 | Environmental impacts per m² of EconoClad[®] 40mm (results are in accordance with Green Star v1.3)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Human Toxicity cancer	HTc	CTUh	1.14E-07	1.54E-14	8.14E-12	2.44E-14	5.02E-12	2.44E-14	3.50E-11	1.18E-12	-1.74E-10
Human Toxicity non-cancer	HTnc	CTUh	7.34E-08	3.46E-15	1.42E-12	5.50E-15	8.52E-13	5.50E-15	5.68E-12	1.84E-13	-4.48E-12
Land use	LU	kg C deficit eq.	1.49E+01	1.80E-03	4.90E-01	2.86E-03	1.23E-02	2.86E-03	1.84E-01	2.80E-01	-6.81E-01
Ionising radiation	IR	kBq U235 eq	6.79E-01	3.70E-07	2.14E-02	5.88E-07	3.06E-05	5.88E-07	2.77E-04	1.83E-03	-3.11E-04
Particulate Matter	PM	kg PM _{2,5} -Equiv.	1.74E-02	6.72E-07	7.61E-05	1.07E-06	7.30E-05	1.07E-06	5.35E-04	3.31E-05	-4.03E-03
Resource depletion - water	RDW	m ³	2.10E-01	3.30E-06	1.02E-03	5.24E-06	9.97E-04	5.24E-06	6.93E-03	5.19E-04	-3.65E-03

EconoClad® 60mm

Table 128 | Environmental impacts per m² of EconoClad® 60mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Global warming potential - fossil	GWP - Fossil	kg CO ₂ eq.	3.47E+01	7.75E-04	8.94E-02	1.78E+00	1.39E-01	2.75E-03	1.06E+00	2.21E-01	-3.67E+00
Global warming potential - biogenic	GWP - Biogenic	kg CO ₂ eq.	3.80E-02	3.38E-08	1.48E-01	2.94E-03	4.85E-04	6.51E-08	3.23E-03	1.46E-04	1.64E-03
Global warming potential - land use/ land transformation	GWP - Luluc	kg CO ₂ eq.	1.25E-02	6.43E-09	6.34E-05	5.63E-06	2.87E-08	2.01E-08	4.00E-07	2.39E-05	-3.83E-07
Global warming potential - total	GWP - Total	kg CO₂ eq.	3.47E+01	7.75E-04	2.38E-01	1.78E+00	1.40E-01	2.75E-03	1.06E+00	2.21E-01	-3.67E+00
Ozone depletion potential	ODP	kg CFC 11 eq.	2.31E-06	1.18E-10	4.17E-08	5.04E-08	2.66E-10	1.12E-10	1.03E-08	6.65E-09	-7.42E-09
Acidification potential	AP	mol H ⁺ eq.	1.74E-01	6.11E-06	1.33E-03	9.09E-03	1.02E-03	1.88E-05	6.96E-03	1.94E-04	-3.36E-02
Eutrophication – freshwater	EP - F	kg P eq.	3.92E-03	2.69E-08	-2.97E-05	1.68E-04	5.50E-06	1.03E-07	4.02E-05	3.44E-06	-8.31E-05
Eutrophication – marine	EP - M	kg N eq.	4.03E-02	1.75E-06	1.95E-04	1.55E-03	1.51E-04	5.30E-06	1.12E-03	4.02E-03	-6.74E-03
Eutrophication – terrestrial	EP - T	mol N eq.	3.52E-01	1.92E-05	2.15E-03	1.32E-02	1.62E-03	5.78E-05	1.20E-02	7.05E-04	-7.66E-02
Photochemical ozone creation potential	POCP	kg NMVOC eq.	1.11E-01	4.74E-06	4.53E-04	3.85E-03	4.26E-04	1.42E-05	3.12E-03	2.49E-04	-1.82E-02
Abiotic depletion potential - minerals and metals	ADP	kg Sb eq.	3.44E-04	2.81E-09	2.71E-06	4.06E-06	1.81E-07	1.33E-08	1.43E-06	7.33E-08	-1.08E-06
Abiotic depletion potential - fossil fuels	ADPF	MJ	5.23E+02	1.10E-02	-1.07E+00	3.19E+01	6.63E-01	1.40E-02	6.79E+00	5.54E-01	-4.82E+01
Water Depletion Potential	WDP	m ³	1.40E+01	2.30E-04	7.64E-01	3.47E+01	2.28E-02	2.92E-02	6.17E-01	2.23E-02	-2.60E+01

Table 129 | Resource use per m² of EconoClad® 60mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Use of renewable primary energy excluding renewable primary energy resources used as raw materials	PERE	MJ	2.26E+01	1.12E-04	4.15E-01	3.26E-01	1.20E-01	4.45E-04	7.77E-01	1.02E-02	-5.32E-01
Use of renewable primary energy resources used as raw materials	PERM	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	0.00E+00
Primary renewable energy - total	PERT	MJ	2.26E+01	1.12E-04	4.15E-01	3.26E-01	1.20E-01	4.45E-04	7.77E-01	1.02E-02	-5.32E-01
Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials	PENRE	MJ	4.33E+02	1.10E-02	2.75E+00	3.19E+01	6.63E-01	1.40E-02	6.79E+00	5.54E-01	-4.82E+01
Use of non-renewable primary energy resources used as raw materials	PENRM	MJ	8.90E+01	0.00E+00	1.91E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-7.50E+01	0.00E+00
Primary non renewable energy - total	PENRT	MJ	5.22E+02	1.10E-02	1.64E+01	3.19E+01	6.63E-01	1.40E-02	6.79E+00	-7.45E+01	-4.82E+01
Use of secondary material	SM	kg	5.75E-01	0.00E+00	1.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of renewable secondary fuels	RSF	MJ	-1.40E-20	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of non-renewable secondary fuels	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	0.00E+00
Use of net fresh water	FW	m ³	1.37E-01	1.32E-06	1.58E-04	3.67E-03	1.14E-04	4.88E-06	9.66E-04	3.12E-04	-1.34E-03

Table 130 | Waste generated per m² of EconoClad® 60mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Hazardous waste disposed	HWD	kg	2.84E-04	1.46E-08	-9.89E-06	1.08E-05	4.50E-07	4.38E-08	3.65E-06	7.89E-07	-4.35E-06
Non-hazardous waste disposed	NHWD	kg	2.00E+00	7.62E-05	4.12E-01	6.54E-02	8.58E-03	2.81E-04	1.07E-01	2.16E+00	-5.51E-01
Radioactive waste disposed/stored	RWD	kg	1.33E-03	5.78E-11	1.98E-05	6.94E-06	4.39E-09	1.90E-10	3.98E-08	3.09E-06	-4.49E-08

Table 131 | Output flows per m² of EconoClad[®] 60mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Components for reuse	CRU	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	0.00E+00
Materials for recycling	MFR	kg	3.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.42E+00	0.00E+00	0.00E+00
Materials for energy recovery	MFRE	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	0.00E+00
Exported energy - electricity	EE - e	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	0.00E+00
Exported energy - thermal	EE - t	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	0.00E+00

Table 132 | Additional environmental impacts per m² of EconoClad[®] 60mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Global warming potential, excluding biogenic uptake, emissions and storage	GWP-GHG	kg CO ₂ eq	1.87E+01	7.59E-04	9.36E-02	1.68E+00	1.37E-01	2.70E-03	1.05E+00	1.67E-01	-3.17E+00
Particulate matter	PM	disease incidence	1.71E-06	4.01E-11	4.97E-10	8.57E-08	8.88E-09	1.47E-10	6.09E-08	3.68E-09	-2.29E-07
Ionising radiation - human health	IRP	kBq U-235 eq	9.06E-01	4.18E-07	2.23E-02	4.85E-02	3.05E-05	1.33E-06	2.77E-04	2.52E-03	-3.11E-04
Ecotoxicity - freshwater	ETP - fw	CTUe	8.35E+02	5.93E-03	-2.60E-01	7.90E+00	3.79E-01	4.70E-02	3.21E+00	1.03E+00	-7.01E+01
Human toxicity potential - cancer effects	HTP - c	CTUh	1.78E-07	2.01E-13	3.83E-09	4.00E-10	2.43E-11	1.08E-12	1.76E-10	1.67E-11	-6.66E-10
Human toxicity potential - non cancer effects	HTP - nc	CTUh	1.76E-06	7.19E-12	2.07E-09	7.25E-09	7.26E-10	4.58E-11	5.49E-09	4.42E-10	-4.59E-08
Soil quality	SQP	Pt	5.60E+01	2.88E-03	1.19E+00	6.96E-01	4.26E-01	1.24E-02	2.89E+00	1.20E+00	-5.84E+00

Table 133 | Environmental impacts per m² of EconoClad[®] 60mm (results are in accordance with EN15804+A1:2013)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Global warming potential	GWP	kg CO ₂ eq	3.36E+01	7.61E-04	1.75E-01	1.72E+00	1.38E-01	2.70E-03	1.05E+00	1.90E-01	-3.16E+00
Ozone layer depletion	ODP	kg CFC-11 eq	2.18E-06	9.33E-11	3.63E-08	8.89E-11	2.33E-10	8.89E-11	8.44E-09	5.27E-09	-5.94E-09
Acidification potential	AP	kg SO ₂ eq	1.18E-01	3.24E-06	3.67E-04	8.68E-06	2.11E-04	8.68E-06	1.64E-03	1.48E-04	-2.08E-02
Eutrophication potential	EP	kg PO ₄ ³⁻ eq	2.94E-02	7.40E-07	-1.70E-05	2.19E-06	7.30E-05	2.19E-06	5.39E-04	1.71E-03	-2.86E-03
Photochemical ozone creation potential	POCP	kg C2H4 eq	1.64E-02	2.18E-07	3.41E-05	5.61E-07	4.31E-06	5.61E-07	3.83E-05	3.34E-05	-7.54E-03
Abiotic depletion potential for non-fossil resources	ADPE	kg Sb eq	3.44E-04	2.81E-09	2.71E-06	1.33E-08	1.81E-07	1.33E-08	1.43E-06	7.33E-08	-1.08E-06
Abiotic depletion potential for fossil resources	ADPF	MJ	4.72E+02	1.11E-02	3.02E+00	4.04E-02	1.55E+00	4.04E-02	1.25E+01	5.23E-01	-7.20E+01

Table 134 | Environmental impacts per m² of EconoClad[®] 60mm (results are in accordance with Green Star v1.3)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Human Toxicity cancer	HTc	CTUh	1.65E-07	1.74E-14	7.86E-12	2.67E-14	5.02E-12	2.67E-14	3.50E-11	1.63E-12	-1.74E-10
Human Toxicity non-cancer	HTnc	CTUh	1.07E-07	3.90E-15	1.45E-12	6.00E-15	8.52E-13	6.00E-15	5.68E-12	2.54E-13	-4.48E-12
Land use	LU	kg C deficit eq.	1.98E+01	2.03E-03	4.92E-01	3.12E-03	1.23E-02	3.12E-03	1.84E-01	3.76E-01	-6.81E-01
Ionising radiation	IR	kBq U235 eq	9.07E-01	4.17E-07	2.23E-02	6.42E-07	3.06E-05	6.42E-07	2.77E-04	2.52E-03	-3.11E-04
Particulate Matter	PM	kg PM2,5-Equiv.	2.20E-02	7.58E-07	6.01E-05	1.17E-06	7.30E-05	1.17E-06	5.35E-04	4.58E-05	-4.03E-03
Resource depletion - water	RDW	m ³	2.77E-01	3.72E-06	9.34E-04	5.72E-06	9.97E-04	5.72E-06	6.93E-03	7.13E-04	-3.65E-03

EconoClad® 80mm

Table 135 | Environmental impacts per m² of EconoClad® 80mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Global warming potential - fossil	GWP - Fossil	kg CO ₂ eq.	3.87E+01	8.63E-04	7.86E-02	1.78E+00	1.39E-01	2.98E-03	1.06E+00	2.85E-01	-3.67E+00
Global warming potential - biogenic	GWP - Biogenic	kg CO ₂ eq.	4.08E-02	3.76E-08	1.61E-01	2.94E-03	4.85E-04	7.05E-08	3.23E-03	1.88E-04	1.64E-03
Global warming potential - land use/ land transformation	GWP - Luluc	kg CO ₂ eq.	1.61E-02	7.15E-09	6.43E-05	5.63E-06	2.87E-08	2.18E-08	4.00E-07	3.05E-05	-3.83E-07
Global warming potential - total	GWP - Total	kg CO₂ eq.	3.87E+01	8.63E-04	2.40E-01	1.78E+00	1.40E-01	2.98E-03	1.06E+00	2.85E-01	-3.67E+00
Ozone depletion potential	ODP	kg CFC 11 eq.	2.97E-06	1.31E-10	4.16E-08	5.04E-08	2.66E-10	1.21E-10	1.03E-08	8.40E-09	-7.42E-09
Acidification potential	AP	mol H ⁺ eq.	1.98E-01	6.80E-06	1.31E-03	9.09E-03	1.02E-03	2.03E-05	6.96E-03	2.46E-04	-3.36E-02
Eutrophication – freshwater	EP - F	kg P eq.	5.07E-03	2.99E-08	-3.47E-05	1.68E-04	5.50E-06	1.12E-07	4.02E-05	4.40E-06	-8.31E-05
Eutrophication – marine	EP - M	kg N eq.	4.70E-02	1.95E-06	1.92E-04	1.55E-03	1.51E-04	5.73E-06	1.12E-03	5.18E-03	-6.74E-03
Eutrophication – terrestrial	EP - T	mol N eq.	3.97E-01	2.13E-05	2.12E-03	1.32E-02	1.62E-03	6.26E-05	1.20E-02	8.94E-04	-7.66E-02
Photochemical ozone creation potential	POCP	kg NMVOC eq.	1.26E-01	5.27E-06	4.18E-04	3.85E-03	4.26E-04	1.54E-05	3.12E-03	3.16E-04	-1.82E-02
Abiotic depletion potential - minerals and metals	ADP	kg Sb eq.	4.34E-04	3.13E-09	2.79E-06	4.06E-06	1.81E-07	1.44E-08	1.43E-06	9.36E-08	-1.08E-06
Abiotic depletion potential - fossil fuels	ADPF	MJ	6.19E+02	1.23E-02	-1.47E+00	3.19E+01	6.63E-01	1.51E-02	6.79E+00	7.02E-01	-4.82E+01
Water Depletion Potential	WDP	m ³	1.67E+01	2.56E-04	8.30E-01	3.47E+01	2.28E-02	3.16E-02	6.17E-01	2.82E-02	-2.60E+01

Table 136 | Resource use per m² of EconoClad® 80mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Use of renewable primary energy excluding renewable primary energy resources used as raw materials	PERE	MJ	2.55E+01	1.25E-04	4.31E-01	3.26E-01	1.20E-01	4.82E-04	7.77E-01	1.30E-02	-5.32E-01
Use of renewable primary energy resources used as raw materials	PERM	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	0.00E+00
Primary renewable energy - total	PERT	MJ	2.55E+01	1.25E-04	4.31E-01	3.26E-01	1.20E-01	4.82E-04	7.77E-01	1.30E-02	-5.32E-01
Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials	PENRE	MJ	5.04E+02	1.23E-02	2.70E+00	3.19E+01	6.63E-01	1.51E-02	6.79E+00	7.02E-01	-4.82E+01
Use of non-renewable primary energy resources used as raw materials	PENRM	MJ	1.13E+02	0.00E+00	2.08E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-9.68E+01	0.00E+00
Primary non renewable energy - total	PENRT	MJ	6.17E+02	1.23E-02	1.81E+01	3.19E+01	6.63E-01	1.51E-02	6.79E+00	-9.61E+01	-4.82E+01
Use of secondary material	SM	kg	5.75E-01	0.00E+00	1.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of renewable secondary fuels	RSF	MJ	-1.40E-20	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of non-renewable secondary fuels	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	0.00E+00
Use of net fresh water	FW	m ³	1.66E-01	1.46E-06	1.24E-04	3.67E-03	1.14E-04	5.28E-06	9.66E-04	3.95E-04	-1.34E-03

Table 137 | Waste generated per m² of EconoClad® 80mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Hazardous waste disposed	HWD	kg	3.55E-04	1.61E-08	-1.12E-05	1.08E-05	4.50E-07	4.74E-08	3.65E-06	1.00E-06	-4.35E-06
Non-hazardous waste disposed	NHWD	kg	2.37E+00	8.48E-05	4.53E-01	6.54E-02	8.58E-03	3.04E-04	1.07E-01	2.71E+00	-5.51E-01
Radioactive waste disposed/stored	RWD	kg	1.44E-03	6.43E-11	2.02E-05	6.94E-06	4.39E-09	2.06E-10	3.98E-08	3.91E-06	-4.49E-08

Table 138 | Output flows per m² of EconoClad[®] 80mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Components for reuse	CRU	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	0.00E+00
Materials for recycling	MFR	kg	3.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.42E+00	0.00E+00	0.00E+00
Materials for energy recovery	MFRE	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	0.00E+00
Exported energy - electricity	EE - e	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	0.00E+00
Exported energy - thermal	EE - t	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	0.00E+00

Table 139 | Additional environmental impacts per m² of EconoClad[®] 80mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Global warming potential, excluding biogenic uptake, emissions and storage	GWP-GHG	kg CO ₂ eq	2.25E+01	8.45E-04	8.35E-02	1.68E+00	1.37E-01	2.92E-03	1.05E+00	2.15E-01	-3.17E+00
Particulate matter	PM	disease incidence	1.90E-06	4.47E-11	-7.17E-10	8.57E-08	8.88E-09	1.59E-10	6.09E-08	4.67E-09	-2.29E-07
Ionising radiation - human health	IRP	kBq U-235 eq	1.13E+00	4.65E-07	2.32E-02	4.85E-02	3.05E-05	1.44E-06	2.77E-04	3.20E-03	-3.11E-04
Ecotoxicity - freshwater	ETP - fw	CTUe	1.08E+03	6.60E-03	-5.57E-01	7.90E+00	3.79E-01	5.09E-02	3.21E+00	1.32E+00	-7.01E+01
Human toxicity potential - cancer effects	HTP - c	CTUh	2.33E-07	2.24E-13	4.09E-09	4.00E-10	2.43E-11	1.17E-12	1.76E-10	2.14E-11	-6.66E-10
Human toxicity potential - non cancer effects	HTP - nc	CTUh	2.29E-06	8.00E-12	2.05E-09	7.25E-09	7.26E-10	4.96E-11	5.49E-09	5.66E-10	-4.59E-08
Soil quality	SQP	Pt	6.60E+01	3.20E-03	1.21E+00	6.96E-01	4.26E-01	1.35E-02	2.89E+00	1.52E+00	-5.84E+00

Table 140 | Environmental impacts per m² of EconoClad[®] 80mm (results are in accordance with EN15804+A1:2013)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Global warming potential	GWP	kg CO ₂ eq	3.74E+01	8.47E-04	1.72E-01	1.72E+00	1.38E-01	2.92E-03	1.05E+00	2.45E-01	-3.16E+00
Ozone layer depletion	ODP	kg CFC-11 eq	2.82E-06	1.04E-10	3.62E-08	9.62E-11	2.33E-10	9.62E-11	8.44E-09	6.67E-09	-5.94E-09
Acidification potential	AP	kg SO ₂ eq	1.37E-01	3.61E-06	3.42E-04	9.40E-06	2.11E-04	9.40E-06	1.64E-03	1.88E-04	-2.08E-02
Eutrophication potential	EP	kg PO ₄ ³⁻ eq	3.62E-02	8.23E-07	-3.30E-05	2.37E-06	7.30E-05	2.37E-06	5.39E-04	2.20E-03	-2.86E-03
Photochemical ozone creation potential	POCP	kg C2H4 eq	1.94E-02	2.42E-07	2.86E-05	6.08E-07	4.31E-06	6.08E-07	3.83E-05	4.29E-05	-7.54E-03
Abiotic depletion potential for non-fossil resources	ADPE	kg Sb eq	4.34E-04	3.13E-09	2.79E-06	1.44E-08	1.81E-07	1.44E-08	1.43E-06	9.36E-08	-1.08E-06
Abiotic depletion potential for fossil resources	ADPF	MJ	5.45E+02	1.23E-02	2.92E+00	4.38E-02	1.55E+00	4.38E-02	1.25E+01	6.62E-01	-7.20E+01

Table 141 | Environmental impacts per m² of EconoClad[®] 80mm (results are in accordance with Green Star v1.3)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Human Toxicity cancer	HTc	CTUh	2.17E-07	1.93E-14	7.60E-12	2.89E-14	5.02E-12	2.89E-14	3.50E-11	2.07E-12	-1.74E-10
Human Toxicity non-cancer	HTnc	CTUh	1.40E-07	4.34E-15	1.48E-12	6.50E-15	8.52E-13	6.50E-15	5.68E-12	3.22E-13	-4.48E-12
Land use	LU	kg C deficit eq.	2.46E+01	2.26E-03	4.95E-01	3.38E-03	1.23E-02	3.38E-03	1.84E-01	4.70E-01	-6.81E-01
Ionising radiation	IR	kBq U235 eq	1.13E+00	4.64E-07	2.32E-02	6.95E-07	3.06E-05	6.95E-07	2.77E-04	3.20E-03	-3.11E-04
Particulate Matter	PM	kg PM2,5-Equiv.	2.66E-02	8.43E-07	4.43E-05	1.26E-06	7.30E-05	1.26E-06	5.35E-04	5.82E-05	-4.03E-03
Resource depletion - water	RDW	m ³	3.44E-01	4.14E-06	8.45E-04	6.20E-06	9.97E-04	6.20E-06	6.93E-03	9.03E-04	-3.65E-03

EconoClad® 100mm

Table 142 | Environmental impacts per m² of EconoClad® 100mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Global warming potential - fossil	GWP - Fossil	kg CO ₂ eq.	4.27E+01	9.50E-04	6.73E-02	1.78E+00	1.39E-01	3.21E-03	1.06E+00	3.49E-01	-3.67E+00
Global warming potential - biogenic	GWP - Biogenic	kg CO ₂ eq.	4.36E-02	4.14E-08	1.75E-01	2.94E-03	4.85E-04	7.60E-08	3.23E-03	2.31E-04	1.64E-03
Global warming potential - land use/ land transformation	GWP - Luluc	kg CO ₂ eq.	1.97E-02	7.87E-09	6.52E-05	5.63E-06	2.87E-08	2.34E-08	4.00E-07	3.71E-05	-3.83E-07
Global warming potential - total	GWP - Total	kg CO₂ eq.	4.27E+01	9.50E-04	2.42E-01	1.78E+00	1.40E-01	3.21E-03	1.06E+00	3.50E-01	-3.67E+00
Ozone depletion potential	ODP	kg CFC 11 eq.	3.64E-06	1.45E-10	4.16E-08	5.04E-08	2.66E-10	1.31E-10	1.03E-08	1.02E-08	-7.42E-09
Acidification potential	AP	mol H ⁺ eq.	2.21E-01	7.49E-06	1.29E-03	9.09E-03	1.02E-03	2.19E-05	6.96E-03	2.99E-04	-3.36E-02
Eutrophication – freshwater	EP - F	kg P eq.	6.21E-03	3.29E-08	-3.97E-05	1.68E-04	5.50E-06	1.21E-07	4.02E-05	5.37E-06	-8.31E-05
Eutrophication – marine	EP - M	kg N eq.	5.37E-02	2.14E-06	1.88E-04	1.55E-03	1.51E-04	6.18E-06	1.12E-03	6.36E-03	-6.74E-03
Eutrophication – terrestrial	EP - T	mol N eq.	4.41E-01	2.35E-05	2.08E-03	1.32E-02	1.62E-03	6.74E-05	1.20E-02	1.09E-03	-7.66E-02
Photochemical ozone creation potential	POCP	kg NMVOC eq.	1.42E-01	5.80E-06	3.81E-04	3.85E-03	4.26E-04	1.66E-05	3.12E-03	3.85E-04	-1.82E-02
Abiotic depletion potential - minerals and metals	ADP	kg Sb eq.	5.24E-04	3.45E-09	2.87E-06	4.06E-06	1.81E-07	1.55E-08	1.43E-06	1.14E-07	-1.08E-06
Abiotic depletion potential - fossil fuels	ADPF	MJ	7.13E+02	1.35E-02	-1.89E+00	3.19E+01	6.63E-01	1.63E-02	6.79E+00	8.52E-01	-4.82E+01
Water Depletion Potential	WDP	m ³	1.94E+01	2.82E-04	8.95E-01	3.47E+01	2.28E-02	3.40E-02	6.17E-01	3.42E-02	-2.60E+01

Table 143 | Resource use per m² of EconoClad® 100mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Use of renewable primary energy excluding renewable primary energy resources used as raw materials	PERE	MJ	2.84E+01	1.38E-04	4.47E-01	3.26E-01	1.20E-01	5.19E-04	7.77E-01	1.59E-02	-5.32E-01
Use of renewable primary energy resources used as raw materials	PERM	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	0.00E+00
Primary renewable energy - total	PERT	MJ	2.84E+01	1.38E-04	4.47E-01	3.26E-01	1.20E-01	5.19E-04	7.77E-01	1.59E-02	-5.32E-01
Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials	PENRE	MJ	5.76E+02	1.35E-02	2.63E+00	3.19E+01	6.63E-01	1.63E-02	6.79E+00	8.52E-01	-4.82E+01
Use of non-renewable primary energy resources used as raw materials	PENRM	MJ	1.37E+02	0.00E+00	2.26E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-1.19E+02	0.00E+00
Primary non renewable energy - total	PENRT	MJ	7.12E+02	1.35E-02	2.00E+01	3.19E+01	6.63E-01	1.63E-02	6.79E+00	-1.18E+02	-4.82E+01
Use of secondary material	SM	kg	5.75E-01	0.00E+00	1.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of renewable secondary fuels	RSF	MJ	-1.40E-20	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of non-renewable secondary fuels	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	0.00E+00
Use of net fresh water	FW	m ³	1.96E-01	1.61E-06	8.87E-05	3.67E-03	1.14E-04	5.69E-06	9.66E-04	4.79E-04	-1.34E-03

Table 144 | Waste generated per m² of EconoClad® 100mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Hazardous waste disposed	HWD	kg	4.26E-04	1.78E-08	-1.26E-05	1.08E-05	4.50E-07	5.11E-08	3.65E-06	1.21E-06	-4.35E-06
Non-hazardous waste disposed	NHWD	kg	2.75E+00	9.34E-05	4.85E-01	6.54E-02	8.58E-03	3.28E-04	1.07E-01	3.26E+00	-5.51E-01
Radioactive waste disposed/stored	RWD	kg	1.56E-03	7.08E-11	2.06E-05	6.94E-06	4.39E-09	2.22E-10	3.98E-08	4.73E-06	-4.49E-08

Table 145 | Output flows per m² of EconoClad® 100mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Components for reuse	CRU	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	0.00E+00
Materials for recycling	MFR	kg	3.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.42E+00	0.00E+00	0.00E+00
Materials for energy recovery	MFRE	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	0.00E+00
Exported energy - electricity	EE - e	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	0.00E+00
Exported energy - thermal	EE - t	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	0.00E+00

Table 146 | Additional environmental impacts per m² of EconoClad® 100mm (results are in accordance with EN15804+A2:2019)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Global warming potential, excluding biogenic uptake, emissions and storage	GWP-GHG	kg CO ₂ eq	2.63E+01	9.30E-04	7.30E-02	1.68E+00	1.37E-01	3.15E-03	1.05E+00	2.64E-01	-3.17E+00
Particulate matter	PM	disease incidence	2.09E-06	4.92E-11	-1.97E-09	8.57E-08	8.88E-09	1.71E-10	6.09E-08	5.67E-09	-2.29E-07
Ionising radiation - human health	IRP	kBq U-235 eq	1.36E+00	5.12E-07	2.41E-02	4.85E-02	3.05E-05	1.55E-06	2.77E-04	3.89E-03	-3.11E-04
Ecotoxicity - freshwater	ETP - fw	CTUe	1.33E+03	7.27E-03	-8.70E-01	7.90E+00	3.79E-01	5.49E-02	3.21E+00	1.61E+00	-7.01E+01
Human toxicity potential - cancer effects	HTP - c	CTUh	2.88E-07	2.47E-13	4.36E-09	4.00E-10	2.43E-11	1.26E-12	1.76E-10	2.61E-11	-6.66E-10
Human toxicity potential - non cancer effects	HTP - nc	CTUh	2.82E-06	8.81E-12	2.03E-09	7.25E-09	7.26E-10	5.34E-11	5.49E-09	6.91E-10	-4.59E-08
Soil quality	SQP	Pt	7.61E+01	3.52E-03	1.23E+00	6.96E-01	4.26E-01	1.45E-02	2.89E+00	1.85E+00	-5.84E+00

Table 147 | Environmental impacts per m² of EconoClad® 100mm (results are in accordance with EN15804+A1:2013)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Global warming potential	GWP	kg CO ₂ eq	4.13E+01	9.32E-04	1.69E-01	1.72E+00	1.38E-01	3.15E-03	1.05E+00	3.00E-01	-3.16E+00
Ozone layer depletion	ODP	kg CFC-11 eq	3.45E-06	1.14E-10	3.60E-08	1.04E-10	2.33E-10	1.04E-10	8.44E-09	8.07E-09	-5.94E-09
Acidification potential	AP	kg SO ₂ eq	1.56E-01	3.97E-06	3.15E-04	1.01E-05	2.11E-04	1.01E-05	1.64E-03	2.28E-04	-2.08E-02
Eutrophication potential	EP	kg PO ₄ ³⁻ eq	4.30E-02	9.07E-07	-4.96E-05	2.56E-06	7.30E-05	2.56E-06	5.39E-04	2.70E-03	-2.86E-03
Photochemical ozone creation potential	POCP	kg C2H4 eq	2.24E-02	2.67E-07	2.29E-05	6.55E-07	4.31E-06	6.55E-07	3.83E-05	5.26E-05	-7.54E-03
Abiotic depletion potential for non-fossil resources	ADPE	kg Sb eq	5.24E-04	3.45E-09	2.87E-06	1.55E-08	1.81E-07	1.55E-08	1.43E-06	1.14E-07	-1.08E-06
Abiotic depletion potential for fossil resources	ADPF	MJ	6.18E+02	1.36E-02	2.81E+00	4.72E-02	1.55E+00	4.72E-02	1.25E+01	8.04E-01	-7.20E+01

Table 148 | Environmental impacts per m² of EconoClad® 100mm (results are in accordance with Green Star v1.3)

Indicator	ABR	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C4	D
Human Toxicity cancer	HTc	CTUh	2.68E-07	2.13E-14	7.31E-12	3.12E-14	5.02E-12	3.12E-14	3.50E-11	2.52E-12	-1.74E-10
Human Toxicity non-cancer	HTnc	CTUh	1.73E-07	4.78E-15	1.51E-12	7.00E-15	8.52E-13	7.00E-15	5.68E-12	3.90E-13	-4.48E-12
Land use	LU	kg C deficit eq.	2.94E+01	2.49E-03	4.97E-01	3.64E-03	1.23E-02	3.64E-03	1.84E-01	5.64E-01	-6.81E-01
Ionising radiation	IR	kBq U235 eq	1.36E+00	5.11E-07	2.41E-02	7.49E-07	3.06E-05	7.49E-07	2.77E-04	3.89E-03	-3.11E-04
Particulate Matter	PM	kg PM2.5-Equiv.	3.11E-02	9.28E-07	2.80E-05	1.36E-06	7.30E-05	1.36E-06	5.35E-04	7.07E-05	-4.03E-03
Resource depletion - water	RDW	m ³	4.11E-01	4.56E-06	7.52E-04	6.68E-06	9.97E-04	6.68E-06	6.93E-03	1.09E-03	-3.65E-03

Interpretation and Recommendations

The LCA of Bondor's insulated panel products, by transfer of text from report to EPD, establish the basis for development of Environmental Product Declarations compliant with PCR 2019:14 (Construction Products) and the overarching EN15804 A2 standard. These EPDs can be used to gain material credits in Green Star projects, contribute to whole building LCAs (following the EN 15978 standard) and to present MetecnoPIR's environmental credentials to customers and other stakeholders.

The scope of the LCA was cradle to gate with modules A1-A3, C and D, plus optional modules A4-A5 and B2. The declared unit is 1 m² of panel available in varying product specifications which fulfils the specified quality criteria during the Reference Service Life of 40 years.

Interpretation

- The product stage (module A1-A3) is the most significant contributor to potential environmental impacts accounting for 88-93% of total GWP.
- All products have a high steel content, with the material and transport to manufacturing site (module A1-A2) accounting for 49% - 80% of total GWP.
- Due to the recyclability of steel, all products have significant recycling potential can be declared. Module D shows benefits for the next system for GWP of 3.67-8.91 kg CO₂ eq
- In terms of resource use across all modules (A1-D), the largest energy use comes from non-renewable primary energy resources (PENRT).
- Across all modules, 100% of the waste disposed is non-hazardous (NHWD).

Recommendations

Based on the results of this LCA, we recommend that MetecnoPIR:

- Steel has significant contributions to total impacts and so alternative materials with lower burdens should be considered.
- Explore the use of electric vehicles for distribution or partner with distribution partners on fuel efficiency training, route optimisation and transitioning their fleet to lower emissions vehicles.
- Work with its suppliers to establish specific/representative Insulation foam chemical production data, particularly for Methylene diphenyl diisocyanate production, which is currently modelled using background data with limited transparency (i.e., system process data).
- Extend the scope of the LCA to include the use and operation of it in buildings, as this will likely emphasise the true-life cycle impact and benefits of Bondor panels compared to alternatives. Note this is beyond the scope of this product-level study for the purposes of the EPD.
- Investigate opportunities to enable and increase the recycling and re-use of panels after their first service life.

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