

ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH EN 15804+A2 & ISO 14025

Ground Granulated Blast Furnace Slag
Adbri Limited, Cockburn Cement



EPD HUB, HUB-7677
Published on 29.09.2026, last updated on 29.09.2026, valid until 28.03.2028

Life Cycle Assessment study has been performed in accordance with the requirements of EN 15804, EPD Hub PCR version 1.2 (24 Mar 2025) and JRC characterization factors EF 3.1.

Created with One Click LCA

an ADBRI company

GENERAL INFORMATION

MANUFACTURER

Manufacturer	Adbri Limited, Cockburn Cement
Address	Cockburn Cement, 45 Leath Road, Perth, Western Australia
Contact details	sales@cockburncement.com.au
Website	http://cockburncement.com.au

EPD STANDARDS, SCOPE AND VERIFICATION

Program operator	EPD Hub, hub@epdhub.com
Reference standard	EN 15804:2012+A2:2019/AC:2021 and ISO 14025
PCR	EPD Hub Core PCR Version 1.2, 24 Mar 2025 NSF PCR for Slag Cement v2.0
Sector	Construction product
Category of EPD	Design phase EPD
Parent EPD number	-
Scope of the EPD	Cradle to gate
EPD author	Zoe Schmidt, Adbri Limited
EPD verification	Independent verification of this EPD and data, according to ISO 14025: ☐ Internal verification ☑ External verification
EPD verifier	Agnieszka Pikus as an authorized verifier for EPD Hub

This EPD is intended for business-to-business communication. The manufacturer has the sole ownership, liability, and responsibility for the EPD. 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 and if they are not compared in a building context.

PRODUCT

Product name	Ground Granulated Blast Furnace Slag
Additional labels	Slag
Product reference	N/A
Place(s) of raw material origin	Japan, Australia
Place of production	Perth, Australia
Place(s) of installation and use	Australia
Period for data	01.01.2026 to 31.05.2026
Averaging in EPD	No grouping
Variation in GWP-fossil for A1-A3 (%)	
GTIN (Global Trade Item Number)	-
NOBB (Norwegian Building Product Database)	-
A1-A3 Specific data (%)	82,9

ENVIRONMENTAL DATA SUMMARY

Declared unit	1 ton
Declared unit mass	1000 kg
Mass of packaging	0 kg
GWP-fossil, A1-A3 ($kgCO_2e$)	143
GWP-total, A1-A3 ($kgCO_2e$)	143
Secondary material, inputs (%)	0
Total energy use, A1-A3 (kWh)	266
Net freshwater use, A1-A3 (m^3)	6,68

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

This slag EPD covers product manufactured and distributed at our Cockburn Cement manufacturing facility in Kwinana, Perth, Western Australia.
Adbri is Building a Better Australia with its locally manufactured cement, lime, concrete, aggregates, industrial minerals and concrete products.
We believe in doing business responsibly; keeping our people and communities safe; meeting the needs of our customers; and creating long-term value for our shareholders. Our pillars of safety, customer focus, inclusivity and sustainable growth guide our approach. We are committed to a sustainable future and our goal of net zero emissions by 2050.
Since our origins in 1882, we have focused on building long-term partnerships that add value. We are a proud Australian company with an extensive local manufacturing presence which allows us to be agile in meeting customer needs.
At Adbri, we are Always Ready to partner with customers that are building Australia.
A proud Australian manufacturer and supplier
As one of Australia's most experienced construction materials companies, we have helped build the foundations of our communities.
Today our 1500+ strong team, located across 200 locations, continue to work closely with our customers, partners and communities to develop solutions that enhance the quality of lives of Australians, underpinned by our national footprint, secure supply chain and technical expertise.
Our brands
With a range of respected and fully owned brands within the Adbri portfolio, complemented by seven joint venture companies, we have the technical capability, product range, scale, and geographic footprint to deliver on our purpose of Building a Better Australia.

PRODUCT DESCRIPTION

This EPD represents Ground Granulated Blast Furnace Slag (GGBFS) supplied by Cockburn Cement from its Kwinana facility in Western Australia and supplied in bulk. Cockburn Cement is a wholly owned Adbri company.
GGBFS is a finely ground supplementary cementitious material (SCM) produced from granulated blast furnace slag, a material arising from the manufacture of iron. The granulated slag is processed and ground to produce GGBFS suitable for use as a cementitious constituent in concrete and other cement-based products.
The product complies with AS 3582.2 – Supplementary cementitious materials – Slag – Ground granulated blast-furnace, which specifies requirements for GGBFS intended for use as a supplementary cementitious material with Portland and blended cement. Relevant technical properties and product conformity are determined in accordance with the requirements and referenced test methods of AS 3582.2.
GGBFS is primarily used as a partial replacement for Portland cement in concrete and other cement-based products. Typical applications include structural and general-purpose concrete, precast products, foundations, marine and civil infrastructure, grouts, and other applications where enhanced durability or reduced heat development is required.
When incorporated into appropriately designed concrete, GGBFS can contribute to reduced permeability and chloride ingress, improved sulfate resistance, reduced risk of alkali-silica reaction (ASR), and reduced heat of hydration. These characteristics can contribute to improved long-term durability, particularly in marine, coastal and other aggressive exposure environments. Performance depends on the GGBFS replacement level, concrete mix design, constituent materials, curing and exposure conditions.
A Reference Service Life (RSL) is not specified for GGBFS itself, as it is an intermediate construction product incorporated into concrete and other cement-based products. The service life of the resulting construction element depends on its mix design, durability design, exposure conditions, construction, curing, maintenance and intended application.

Further information can be found at:http://cockburncement.com.au

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass %	Material origin
Metals	0,1	Japan
Minerals	99,9	Japan
Fossil materials	0	-
Bio-based materials	0	-

BIOGENIC CARBON CONTENT

Product's biogenic carbon content at the factory gate

Biogenic carbon content in product, kg C	0
Biogenic carbon content in packaging, kg C	0

1 kg of biogenic carbon is equivalent to 44/12 kg of CO_2

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1 ton
Mass per declared unit	1000 kg
Functional unit	-
Reference service life	-

SUBSTANCES, REACH - VERY HIGH CONCERN

The product does not contain any REACH SVHC substances in amounts greater than 0,1 % (1000 ppm).

PRODUCT LIFE-CYCLE

SYSTEM BOUNDARY

This EPD covers the life-cycle modules listed in the following table.

Product stage			Assembly stage		Use stage							End of life stage				Beyond the system boundaries		
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D		
x	x	x	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
Raw materials	Transport	Manufacturing	Transport	Assembly	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction/ demolition	Transport	Waste processing	Disposal	Reuse	Recovery	Recycling

Not declared = ND

A5 is not fully declared. Waste processing (from collection through to end-of-waste or final disposal) and full energy and biogenic carbon balancing are accounted for. Storage, product wastage, and installation into the building are excluded.

MANUFACTURING AND PACKAGING (A1-A3)

The environmental impacts considered for the product stage cover the manufacturing of raw materials used in the production as well as packaging materials and other ancillary materials. Also, fuels used by machines, and handling of waste formed in the production processes at the manufacturing facilities are included in this stage. The study also considers the material losses occurring during the manufacturing processes as well as losses during electricity transmission.

A market-based approach is used in modelling the electricity mix utilized in

A1 – Raw material supply includes the production and processing of granulated blast furnace slag (BFS) and any ancillary materials used in the manufacture of GGBFS. Material quantities are based on production and purchasing data for the reporting period.

A2 – Transport includes transport of BFS and other relevant materials to the Kwinana facility. BFS is imported and transported by sea to Western Australia, with sea freight calculated using the applicable AusLCI sea freight factors and relevant shipping distance. Australian land transport is modelled using appropriate Australian transport factors and actual distances where available, with representative assumptions applied where primary data are unavailable.

A3 – Manufacturing includes receipt and storage of BFS at Kwinana, material handling, drying where required, milling to produce GGBFS, transfer to finished-product silos and associated site operations. The product is supplied in bulk and therefore no product packaging is required. Electricity is modelled using the applicable market-based electricity supply profile for the Kwinana facility, with other energy and fuel consumption based on site-specific data and appropriate Australian factors. The dataset used is "Electricity mix, western Australia/AU", Australia, AusLCI 2020, with a factor of 0.64 kgCO2e/kWh.

Material generated during product changeovers is not classified as manufacturing waste and is therefore not modelled as an A3 waste-treatment flow. This changeover material remains suitable for use and is transferred for incorporation into other products suited to its use. Accordingly, no waste treatment or waste transport is attributed to this material.

LIFE CYCLE FLOW DIAGRAM

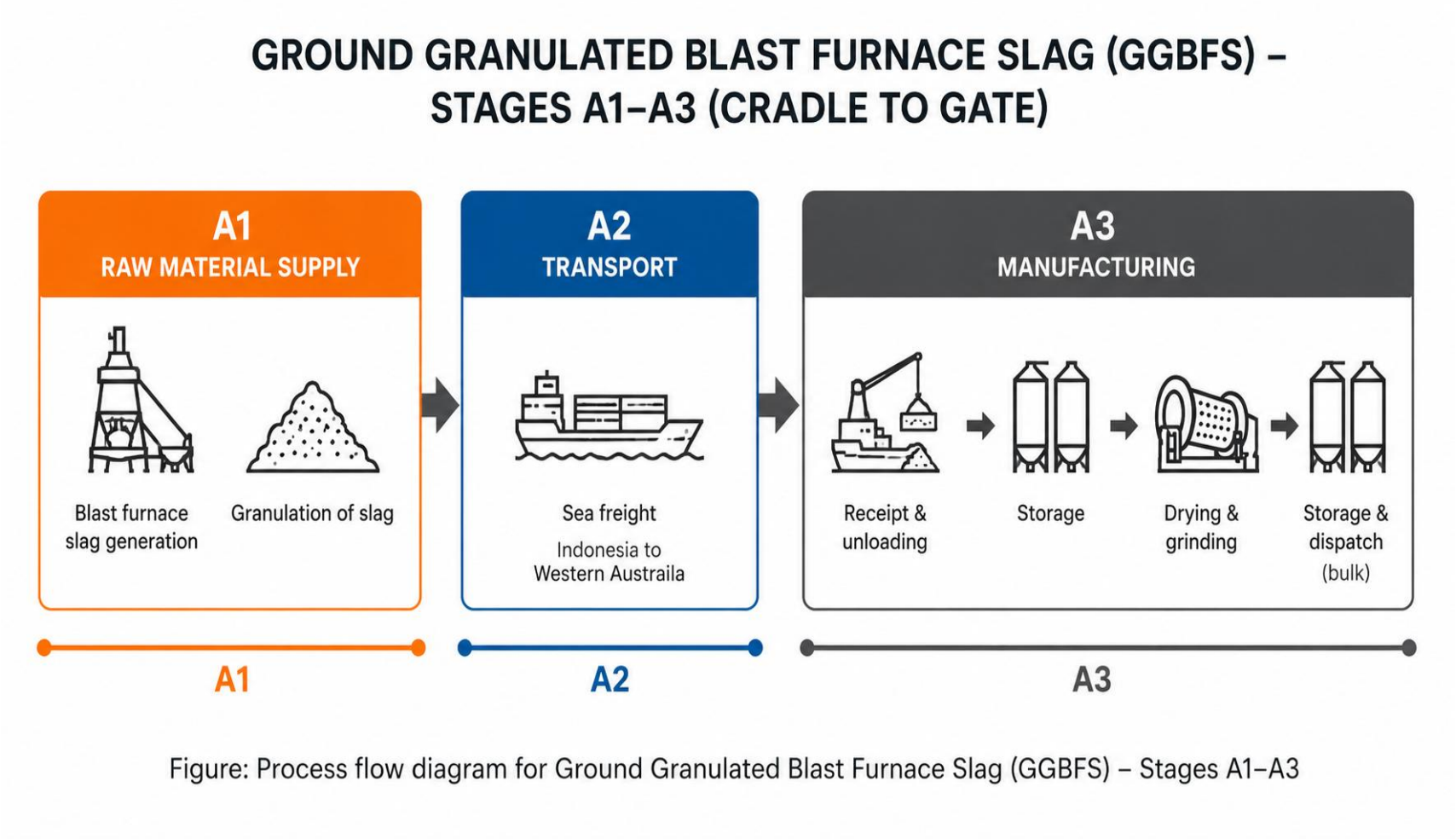


Figure: Process flow diagram for Ground Granulated Blast Furnace Slag (GGBFS) – Stages A1–A3

LIFE-CYCLE ASSESSMENT

CUT-OFF CRITERIA

The study does not exclude any modules or processes which are stated mandatory in the reference standard and the applied PCR. The study does not exclude any hazardous materials or substances. The study includes all major raw material and energy consumption. All inputs and outputs of the unit processes, for which data is available for, are included in the calculation. There is no neglected unit process more than 1% of total mass or energy flows. The module specific total neglected input and output flows also do not exceed 5% of energy usage or mass.

The production of capital equipment, construction activities, and infrastructure, maintenance and operation of capital equipment, personnel-related activities, energy and water use related to company management and sales activities are excluded.

The EPD covers the product stages A1–A3, including raw material supply (A1), transport of raw materials and ancillary materials to the manufacturing site (A2), and manufacturing of the cement product (A3). Manufacturing includes the relevant consumption of fuels, electricity, water, ancillary materials and other process inputs, together with associated emissions and waste treatment.
There are no process or material exclusions.
Further, water used for cleaning and maintenance of the equipment, and transportation used for delivering the raw materials to the factory are omitted since the quantified mass contribution is less than 0.1%.
Activities not directly related to the production of the declared product, such as personnel-related activities and energy and water use associated solely with administration, company management and sales, are excluded.
Capital equipment, construction activities and infrastructure are excluded where permitted by the applicable PCR and EPD programme rules.

VALIDATION OF DATA

Data collection for production, transport, and packaging was conducted using time and site-specific information, as defined in the general information section on page 1 and 2. Upstream process calculations rely on generic data as defined in the Bibliography section. Manufacturer-provided specific and generic data were used for the product's manufacturing stage. The analysis was performed in One Click LCA EPD Generator, with the 'Cut-Off, EN 15804+A2' allocation method, and characterization factors according to EN 15804:2012+A2:2019/AC:2021 and JRC EF 3.1.

ALLOCATION, ESTIMATES AND ASSUMPTIONS

Allocation is required if some material, energy, and waste data cannot be measured separately for the product under investigation. All allocations are done as per the reference standards and the applied PCR. In this study, allocation has been done in the following ways:

Data type	Allocation
Raw materials	Physical Properties
Packaging material	Not applicable
Ancillary materials	Physical Properties
Manufacturing energy and waste	Physical Properties

Modules A2: Vehicle capacity utilisation volume factor is assumed to be 1 which means full load. It may vary but as the role of transportation emission in total results is small and so the variety in load assumed to be negligible. Empty returns are not considered as it is assumed that return trip is used by transportation companies to serve the needs of other clients.
This EPD covers the product stage (modules A1–A3) only (cradle-to-gate). Modules A4–A5, B1–B7, C1–C4 and D are not declared. In accordance with

EN 15804+A2, section 5.2, the omission of modules C1–C4 and D is permitted, as all of the following conditions are fulfilled: 1. the product is physically integrated with other products during installation (e.g. in concrete or mortar), so it cannot be physically separated from them at end of life; 2.the product is no longer identifiable at end of life as a result of a physical and chemical transformation process (cement hydration); 3. the product does not contain biogenic carbon.

PRODUCT & MANUFACTURING SITES GROUPING

Type of grouping	No grouping
Grouping method	Not applicable
Variation in GWP-fossil for A1-A3, %	

LCA SOFTWARE AND BIBLIOGRAPHY

This EPD has been created using One Click LCA EPD Generator for EPD Hub V3 and EPD Process Certification v3.2.5. The LCA and EPD have been prepared according to the reference standards and ISO 14040/14044. The EPD Generator uses Ecoinvent v3.10.1/3.11/3.12 and One Click LCA databases as sources of environmental data. Allocation used in Ecoinvent 3.10.1/3.11/3.12 environmental data sources follow the methodology ‘allocation, Cut-off, EN 15804+A2‘.

- EPD Hub Core Product Category Rules version 1.2, March 2025
- EPD Hub General Program Instructions version 1.3, March 2025
- EN 15804:2012+A2:2019/AC:2021 Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products
- EN 16757:2017 Sustainability of construction works - Environmental product declarations - Product Category Rules for concrete and concrete elements
- EN 15941:2024 Sustainability of construction works - Data quality for environmental assessment of products and construction work - Selection and use of data
- EN 15942:2011 Sustainability of construction works - Environmental product declarations - Communication format business-to-business
- ISO 14025:2006 Environmental statements and programmes for products - Principles and general requirements
- ISO 14040:2006 Environmental management - Life cycle assessment - Principles and framework
- ISO 14044:2006 Environmental management - Life cycle assessment - Requirements and guidelines

ENVIRONMENTAL IMPACT DATA

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

CORE ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, EF 3.1

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP – total[1)]	kg CO_2e	1,70E+01	5,50E+01	7,11E+01	1,43E+02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
GWP – fossil	kg CO_2e	1,70E+01	5,50E+01	7,09E+01	1,43E+02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
GWP – biogenic	kg CO_2e	8,79E-02	1,01E-02	1,92E-01	2,90E-01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
GWP – LULUC	kg CO_2e	1,33E-04	3,59E-02	7,16E-03	4,32E-02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ozone depletion pot.	kg CFC-$_{11}$e	3,03E-07	7,95E-07	5,33E-07	1,63E-06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acidification potential	mol H^+e	7,74E-02	1,39E+00	1,73E-01	1,64E+00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
EP-freshwater[2)]	kg Pe	1,46E-04	2,10E-03	2,67E-03	4,92E-03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
EP-marine	kg Ne	1,61E-02	3,18E-01	7,83E-02	4,12E-01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
EP-terrestrial	mol Ne	1,88E-01	3,54E+00	8,55E-01	4,58E+00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
POCP ("smog")[3)]	kg NMVOCe	6,38E-02	9,88E-01	2,19E-01	1,27E+00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ADP-minerals & metals[4)]	kg Sbe	2,34E-03	6,83E-05	1,07E-04	2,52E-03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ADP-fossil resources	MJ	2,48E+01	6,76E+02	1,54E+02	8,55E+02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Water use[5)]	m^3e depr.	1,26E+02	2,25E+00	1,58E+02	2,87E+02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

1) GWP = Global Warming Potential; 2) EP = Eutrophication potential. Required characterisation method and data are in kg P-eq. Multiply by 3,07 to get PO4e; 3) POCP = Photochemical ozone formation; 4) ADP = Abiotic depletion potential; 5) EN 15804+A2 disclaimer for Abiotic depletion and Water use and optional indicators except Particulate matter and Ionizing radiation, human health. 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.

ADDITIONAL (OPTIONAL) ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, EF 3.1

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Particulate matter	Incidence	1,27E-06	1,77E-06	2,87E-06	5,91E-06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ionizing radiation[6)]	kBq U235e	7,12E-03	3,82E-01	3,74E-01	7,63E-01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ecotoxicity (freshwater)	CTUe	2,26E+01	5,53E+01	2,12E+02	2,90E+02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Human toxicity, cancer	CTUh	6,26E-09	1,23E-08	1,74E-08	3,59E-08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Human tox. non-cancer	CTUh	2,23E-07	1,87E-07	3,71E-07	7,82E-07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SQP[7)]	-	1,24E+01	8,37E+01	2,67E+01	1,23E+02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

6) EN 15804+A2 disclaimer for Ionizing radiation, human health. 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; 7) SQP = Land use related impacts/soil quality.

USE OF NATURAL RESOURCES

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Renew. PER as energy[8)]	MJ	2,01E+00	6,40E+00	4,40E+01	5,24E+01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Renew. PER as material	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total use of renew. PER	MJ	2,01E+00	6,40E+00	4,40E+01	5,24E+01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Non-re. PER as energy	MJ	1,24E+02	6,76E+02	1,05E+02	9,05E+02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Non-re. PER as material	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total use of non-re. PER	MJ	1,24E+02	6,76E+02	1,05E+02	9,05E+02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Secondary materials	kg	1,10E-03	3,81E-01	3,11E-02	4,13E-01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Renew. secondary fuels	MJ	3,38E-05	9,43E-04	3,47E-04	1,32E-03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Non-ren. secondary fuels	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Use of net fresh water	m^3	2,93E+00	5,45E-02	3,69E+00	6,68E+00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

8) PER = Primary energy resources.

END OF LIFE – WASTE

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste	kg	1,05E-02	1,05E+00	5,87E-01	1,65E+00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Non-hazardous waste	kg	6,46E-01	1,45E+01	1,73E+01	3,25E+01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Radioactive waste	kg	2,02E-06	9,35E-05	9,44E-05	1,90E-04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

END OF LIFE – OUTPUT FLOWS

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Components for re-use	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Materials for recycling	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Materials for energy rec	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Exported energy	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Exported energy – Electricity	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Exported energy – Heat	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

ENVIRONMENTAL IMPACTS – EN 15804+A1, CML

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Global Warming Pot.	kg CO_2e	1,70E+01	5,47E+01	7,10E+01	1,43E+02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ozone depletion Pot.	kg $CFC_{-11}e$	2,46E-07	6,32E-07	4,63E-07	1,34E-06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acidification	kg SO_2e	6,25E-02	1,12E+00	1,23E-01	1,31E+00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Eutrophication	kg PO_4^3e	6,96E-03	1,14E-01	8,00E-02	2,01E-01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
POCP (“smog”)	kg C_2H_4e	1,16E-02	5,57E-02	3,63E-03	7,09E-02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ADP-elements	kg Sbe	3,31E-06	6,75E-05	9,25E-05	1,63E-04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
ADP-fossil	MJ	1,23E+02	6,70E+02	1,50E+02	9,43E+02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

ADDITIONAL INDICATOR – GWP-GHG

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-GHG[9)]	kg CO_2e	1,70E+01	5,50E+01	7,09E+01	1,43E+02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

9) This indicator includes all greenhouse gases excluding biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. In addition, the characterisation factors for the flows – CH4 fossil, CH4 biogenic and Dinitrogen monoxide – were updated. This indicator is identical to the GWP-total of EN 15804:2012+A2:2019 except that the characterisation factor for biogenic CO2 is set to zero

SCENARIO DOCUMENTATION

DATA SOURCES

Manufacturing energy scenario documentation

1. Electricity mix, western Australia/AU, Australia, AusLCI, 2020, 0.684 kgCO2e/kWh
2. Natural gas,combusted, Western Australia NGA values /AU, Australia, AusLCI, 0.0557 kgCO2e/MJ
3. Diesel, burned in building machine, <30 MW, Australia, AusLCI, 0.0895 kgCO2e/MJ

THIRD-PARTY VERIFICATION STATEMENT

EPD Hub declares that this EPD is verified in accordance with ISO 14025 by an independent, third-party verifier. The project report on the Life Cycle Assessment and the report(s) on features of environmental relevance are filed at EPD Hub. EPD Hub PCR and ECO Platform verification checklist are used.

EPD Hub is not able to identify any unjustified deviations from the PCR and EN 15804+A2 in the Environmental Product Declaration and its project report.

EPD Hub maintains its independence as a third-party body; it was not involved in the execution of the LCA or in the development of the declaration and has no conflicts of interest regarding this verification.

The company-specific data and upstream and downstream data have been examined as regards plausibility and consistency. The publisher is responsible for ensuring the factual integrity and legal compliance of this declaration.

The software used in creation of this LCA and EPD is verified by EPD Hub to conform to the procedural and methodological requirements outlined in ISO 14025:2010, ISO 14040/14044, EN 15804+A2, and EPD Hub Core Product Category Rules and General Program Instructions.

Verified tools

Tool verifier: Magaly Gonzalez Vazquez
Tool verification validity: 27 March 2025 - 26 March 2028

Agnieszka Pikus as an authorized verifier for EPD Hub Limited

29.09.2026

