

Environmental Product Declaration

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

Mapeair SA (Canada production)

EPD of a single product

from

Mapei Inc.



Programme:	The International EPD System, www.environdec.com
Programme operator:	EPD International AB
Type of EPD:	EPD of a single product from Mapei Inc.
EPD registration number:	EPD-IES-0028056
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An EPD may be updated or depublished if conditions change. To find the latest version of the EPD and to confirm its validity, see www.environdec.com



GENERAL INFORMATION

Programme Information	
Programme:	The International EPD® System
Address:	EPD International AB Box 210 60 SE-100 31 Stockholm Sweden
Website:	www.environdec.com
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Product Category Rules (PCR)

CEN standard EN 15804 serves as the Core Product Category Rules (PCR)

Product Category Rules (PCR): PCR 2019:14 Construction products, version 2.0.1, valid until: 2030-04-07

PCR review was conducted by: The Technical Committee of the International EPD System. See www.environdec.com for a list of members.

Review chair: Rob Rouwette (chair), Noa Meron (co-chair). The review panel may be contacted via the Secretariat www.environdec.com/support.

Third-party Verification

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

☒ EPD process certification* without a pre-verified LCA/EPD tool

Third-party verifier: *Certiquality Srl*

Accredited by: *Accredia*

*EPD process certification involves an accredited certification body certifying and periodically auditing the EPD process and conducting external and independent verification of EPDs that are regularly published. More information can be found in the General Programme Instructions on www.environdec.com.

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

☒ Yes ☐ No

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

EPDs within the same product category but published in different EPD programmes, may not be comparable. For two EPDs to be comparable, they shall be based on the same PCR (including the same first-digit version number) or be based on fully aligned PCRs or versions of PCRs; cover products with identical functions, technical performances and use (e.g. identical declared/functional units); have identical scope in terms of included life-cycle stages (unless the excluded life-cycle stage is demonstrated to be insignificant); apply identical impact assessment methods (including the same version of characterisation factors); and be valid at the time of comparison.

For further information about comparability, see EN 15804 and ISO 14025.

INFORMATION ABOUT EPD OWNER

Owner of the EPD: Mapei Inc.

Address: 2900 Av Francis-Hughes, Laval, QC H7L 3J5, Canada

Contact: corporate.sustainability@mapei.it

Description of the organisation:

Founded in 1937 in Milan, Italy, Mapei produces adhesives and complementary products for laying all types of floor, wall and coating materials, and also specializes in other chemical products used in the building industry, such as waterproofing products, specialty mortars, admixtures for concrete, cement additives, products for underground constructions and for the restoration of concrete and historical buildings. There are currently 98 subsidiaries in the Mapei Group, with a total of 106 production facilities located around the world in 42 different countries and in 5 different continents. Mapei also has 39 central laboratories. Most locations are ISO 9001 and ISO 14001. Mapei invests 12% in its company's total work-force and 5% of its turnover in Research & Development; in particular, 70% of its R&D efforts are directed to develop eco-sustainable and environmentally friendly products, which give important contribution to all major green rating systems for eco-sustainable buildings such as LEED and BREEAM. Furthermore, Mapei has developed a sales and technical service network with offices all over the world and offers an efficient Technical Assistance Service that is valued by architects, engineers, contractors and owners.

PRODUCT INFORMATION

Product name: Mapeair SA

Product identification: Air-Entrainers

Mapeair SA is available in Bulk.

UN CPC code: N/A

Product description Mapeair SA is a specifically developed, multi-component air-entraining admixture that has been stabilized to produce an air-void system consistent with industry requirements and standards. When added separately, Mapeair SA will produce an air-void system that is equivalent to or exceeds that of pure Vinsol-resin-based admixtures at substantially reduced dosage rates.

Name and location of production site(s): Laval (QC)

CONTENT DECLARATION

Product content	Weight, kg	Post-consumer recycled material, weight-% of product	Biogenic material, weight-% of product	Biogenic material ¹ , kg C/product or declared unit
Air Entrainers	0.259	0	0	0
Water	0.741	0	0	0

Additives	1.0E-05	0	0	0
TOTAL	1	0	0	0

The product does not contain a concentration higher than 0,1% (by unit weight) of either carcinogenic substances or substances of very high concern (SVHC) on the REACH Candidate List published by the European Chemicals Agency.

LCA INFORMATION

Declared unit: 1 kg of finished product

Time representativeness: 2024

Geographical scope: Canada

Database(s) and LCA software used:

Sphera database (CUP 2025.2); Ecoinvent 3.11 database
LCA for Experts v.10 (formerly GaBi Software)

Description of system boundaries:

The approach is “cradle to gate” (A1–A3) with modules C1-C4 and module D and optional modules (A1-A3 + A4-A5 + C + D):

- A1, A2, A3 (Product stage): extraction and processing of raw materials (A1), transportation up to the factory gate (A2), manufacturing of the finished product and packaging (A3).

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

	Product stage			Construction process stage		Use stage							End of life stage				Resource recovery stage
	Raw material supply	Transport	Manufacturing	Transport	Construction installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse-Recovery-Recycling-potential
Module	A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Modules declared	X	X	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Geography	CA, US	CA, US	CA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Specific data used	21.5%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – products	0%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – sites	0%			-	-	-	-	-	-	-	-	-	-	-	-	-	-

Data quality assessment:

The EPD covers Mapeair SA manufactured in Laval (QC) during year 2024. The distribution, application and EoL stages of the EPD cover the Canadian scenario. The production is a discontinuous process, in which all the components are mechanically mixed in batches. The EPD uses background data from Ecoinvent 3.11 and Sphera databases CUP 2025.2, and specific data from suppliers. The quality of the relevant data used for the EPD in terms of its time, geography and technology representativeness using EN 15804:2012+A2:2019, Annex E, E2 is mostly “very good” and “good”. The relevant data assessed included “no poor” or “very poor” data.

Process name	Source type	Source	Reference year	Data category	Share of primary data, of GWP GHG results for A1 A3
Manufacturing of product	Collected data	EPD owner	2024	Primary data	0.168%
Generation of electricity used in manufacturing of product	Database	ecoinvent 3.11	2024	Primary data	21.3%
Transport of raw materials to manufacturing sites	Database	Sphera	2024	Secondary data	0%
Raw materials	Database	EPD, Sphera	2021-2024	Secondary data	0%
Total share of primary data, of GWP GHG results for A1- A3					21.5%

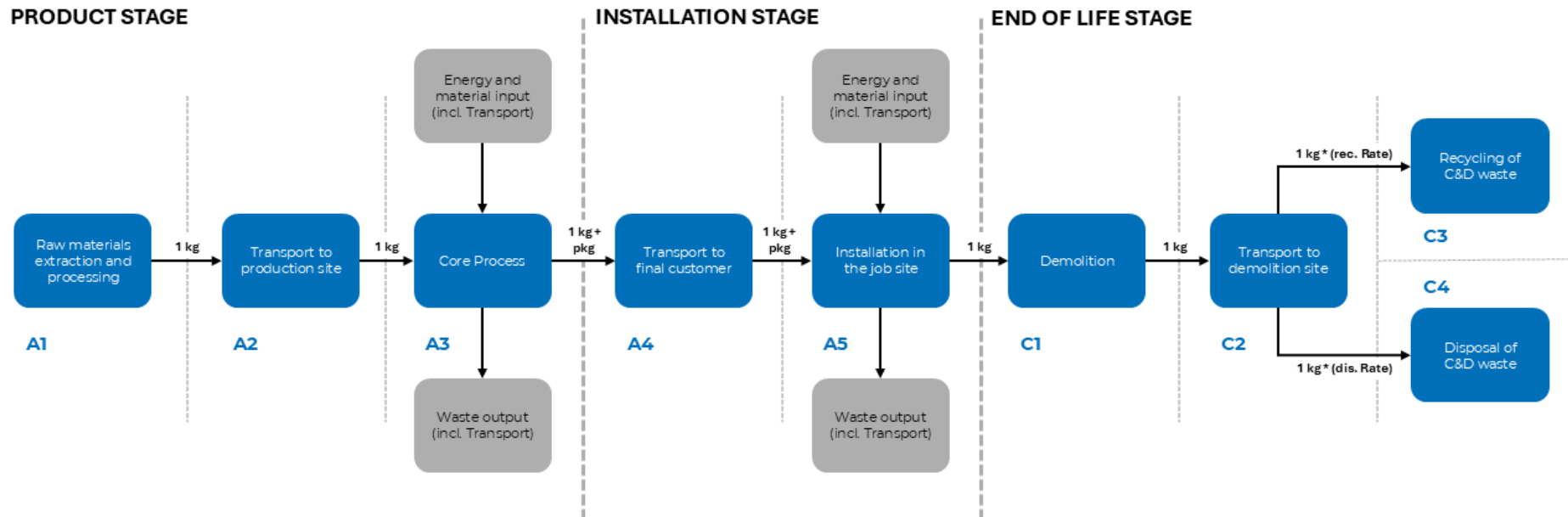
Note

The share of primary data is calculated based on GWP GHG results. It is a simplified indicator for data quality that supports the use of more primary data to increase the representativeness of and comparability between EPDs. Note that the indicator does not capture all relevant aspects of data quality and is not comparable across product categories.

Electricity used in the manufacturing process in A3:

Type of electricity mix	Electricity mix on the market (CA)	
Energy sources	Hydro	10.0%
	Wind	1.6%
	Solar	
	Biomass	4.6%
	Geothermal	0%
	Waste	0%
	Nuclear	7.6%
	Natural gas	40.1%
	Coal	3.0%
	Oil	33.1%
	Peat	0%
	Other	0%
Climate impact GWP GHG	0.566 kg CO ₂ eq./kWh	
Method used to calculate residual electricity mix	Electricity mix CA (IEA 2024)	

System flow diagram:



ENVIRONMENTAL PERFORMANCE

LCA results of the product(s) - main environmental performance results

The following tables show the environmental impacts for the products considered according to the requirements of EN15804:2012+A2:2019/AC:2021. The Characterization Factors are based on EF 3.1 package.

The results are referred to the declared unit. In the whole document, the point “.” is the decimal separator, while the comma “,” is the thousands separator.

Reading example: 9.0 E-03 = $9.0 \cdot 10^{-3}$ = 0.009

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

We discourage the use of the outcomes from modules A1-A3 without considering the results obtained from module C.

Mandatory impact category indicators according to EN 15804

Results per declared unit										
Indicator	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
GWP-total	kg CO ₂ eq.	2.20E-01	ND	ND	ND	ND	ND	ND	ND	ND
GWP-fossil	kg CO ₂ eq.	2.09E-01	ND	ND	ND	ND	ND	ND	ND	ND
GWP-biogenic	kg CO ₂ eq.	1.40E-03	ND	ND	ND	ND	ND	ND	ND	ND
GWP-luluc	kg CO ₂ eq.	1.02E-02	ND	ND	ND	ND	ND	ND	ND	ND
ODP	kg CFC 11 eq.	1.75E-09	ND	ND	ND	ND	ND	ND	ND	ND
AP	mol H ⁺ eq.	7.14E-04	ND	ND	ND	ND	ND	ND	ND	ND
EP-freshwater	kg P eq.	1.37E-06	ND	ND	ND	ND	ND	ND	ND	ND
EP-marine	kg N eq.	1.29E-04	ND	ND	ND	ND	ND	ND	ND	ND
EP-terrestrial	mol N eq.	1.77E-03	ND	ND	ND	ND	ND	ND	ND	ND
POCP	kg NMVOC eq.	4.21E-04	ND	ND	ND	ND	ND	ND	ND	ND

ADP - minerals&metals ¹	kg Sb eq.	3.14E00	ND	ND	ND	ND	ND	ND	ND	ND
ADP-fossil ¹	MJ	1.15E00	ND	ND	ND	ND	ND	ND	ND	ND
WDP ¹	m ³	8.13E-02	ND	ND	ND	ND	ND	ND	ND	ND
Acronyms	GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption									
Disclaimer 1	The results of this environmental impact indicator shall be used with care as the uncertainties of these results are high or as there is limited experience with the indicator.									

Additional mandatory and voluntary impact category indicators

Results per declared unit										
Indicator	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
GWP - GHG ¹	kg CO ₂ eq.	2.41E-01	ND	ND	ND	ND	ND	ND	ND	ND
PM	Disease incidence	2.01E-09	ND	ND	ND	ND	ND	ND	ND	ND
IRP ²	kBq U235 eq.	2.65E-03	ND	ND	ND	ND	ND	ND	ND	ND
ETP-fw ³	CTUe	5.47E-01	ND	ND	ND	ND	ND	ND	ND	ND
HTP-c ³	CTUh	1.36E-11	ND	ND	ND	ND	ND	ND	ND	ND
HTP-nc ³	CTUh	3.07E-10	ND	ND	ND	ND	ND	ND	ND	ND
SQP ³	Dimensionless	3.14E-01	ND	ND	ND	ND	ND	ND	ND	ND
Acronyms	GWP GHG Global warming potential greenhouse gas. PM Potential incidence of disease due to particulate matter emissions; IRP Potential human exposure efficiency relative to U235; ETP-fw = Potential comparative toxic unit for ecosystems; HTP-c = Potential comparative toxic unit for humans; HTP-nc = Potential comparative toxic unit for humans; SQP Potential soil quality index.									
Disclaimer 1	The GWP GHG indicator is termed GWP IOBC/GHG in the ILCD EPD+ data format. The indicator accounts for all greenhouse gases except biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. As such, the indicator is identical to GWP-total except that the CF for biogenic CO ₂ is set to zero.									

Disclaimer 2	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.
Disclaimer 3	The results of this environmental impact indicator shall be used with care as the uncertainties of these results are high or as there is limited experience with the indicator.

Resource use indicators

Results per declared unit										
Indicator	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
PERE*	MJ, net calorific value	5.20E-01	ND	ND	ND	ND	ND	ND	ND	ND
PERM*	MJ, net calorific value	3.68E-02	ND	ND	ND	ND	ND	ND	ND	ND
PERT*	MJ, net calorific value	5.57E-01	ND	ND	ND	ND	ND	ND	ND	ND
PENRE*	MJ, net calorific value	3.97E00	ND	ND	ND	ND	ND	ND	ND	ND
PENRM*	MJ, net calorific value	3.42E-01	ND	ND	ND	ND	ND	ND	ND	ND
PENRT*	MJ, net calorific value	4.31E00	ND	ND	ND	ND	ND	ND	ND	ND
SM	kg	0.00E00	ND	ND	ND	ND	ND	ND	ND	ND
RSF	MJ, net calorific value	0.00E00	ND	ND	ND	ND	ND	ND	ND	ND
NRSF	MJ, net calorific value	0.00E00	ND	ND	ND	ND	ND	ND	ND	ND
FW	m ³	2.05E-03	ND	ND	ND	ND	ND	ND	ND	ND
Acronyms	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRT = Total use of non-renewable primary energy re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water									

*According to Annex 3 of PCR 2.0.1, the option B for the calculation of primary energy use indicators has been used.

Waste indicators

Results per declared unit										
Indicator	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
Hazardous waste disposed	kg	1.75E-02	ND	ND	ND	ND	ND	ND	ND	ND
Non-hazardous waste disposed	kg	8.50E-03	ND	ND	ND	ND	ND	ND	ND	ND
Radioactive waste disposed	kg	1.07E-04	ND	ND	ND	ND	ND	ND	ND	ND

Output flow indicators

Results per declared unit										
Indicator	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
Components for re-use	kg	0.00E00	ND	ND	ND	ND	ND	ND	ND	ND
Material for recycling	kg	4.07E-04	ND	ND	ND	ND	ND	ND	ND	ND
Materials for energy recovery	kg	0.00E00	ND	ND	ND	ND	ND	ND	ND	ND
Exported energy, electricity	MJ	0.00E00	ND	ND	ND	ND	ND	ND	ND	ND
Exported energy, thermal	MJ	0.00E00	ND	ND	ND	ND	ND	ND	ND	ND

ABBREVIATIONS.

Abbreviation	Definition
General Abbreviations	
EN	European Norm (Standard)
EPD	Environmental Product Declaration
EF	Environmental Footprint
GPI	General Programme Instructions
ISO	International Organization for Standardization
LCA	Life Cycle Assessment
PCR	Product Category Rules
c-PCR	Complementary Product Category Rules
CEN	European Committee for Standardization
CLC	Co-location centre
CPC	Central product classification
GHS	Globally harmonized system of classification and labelling of chemicals
GRI	Global Reporting Initiative
Environmental Impact Indicators (EN 15804)	
GHG	Greenhouse gas
GWP	Global Warming Potential (kg CO ₂ eq.)
GWP-fossil	Global Warming Potential from fossil sources (kg CO ₂ eq.)
GWP-biogenic	Global Warming Potential from biogenic sources (kg CO ₂ eq.)
GWP-luluc	Global Warming Potential from land use and land use change (kg CO ₂ eq.)
GWP-total	Total Global Warming Potential (kg CO ₂ eq.)
GWP-GHG	Global Warming Potential for greenhouse gases (kg CO ₂ eq.)
ODP	Ozone Depletion Potential (kg CFC-11 eq.)
AP	Acidification Potential (mol H ⁺ eq.)
EP	Eutrophication Potential
EP-freshwater	Freshwater eutrophication potential (kg P eq.)
EP-marine	Marine eutrophication potential (kg N eq.)
EP-terrestrial	Terrestrial eutrophication potential (mol N eq.)
POCP	Photochemical Ozone Creation Potential (kg NMVOC eq.)
ADP	Abiotic Depletion Potential
ADP-minerals&metals	Abiotic depletion potential for non-fossil resources (kg Sb eq.)
ADP-fossil	Abiotic depletion potential for fossil resources (MJ)
WDP	Water Deprivation Potential (m ³)
Resource Use Indicators	
PERE	Use of renewable primary energy excluding renewable primary energy resources used as raw materials (MJ)
PERM	Use of renewable primary energy resources used as raw materials (MJ)
PERT	Total use of renewable primary energy resources (MJ)
PENRE	Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials (MJ)
PENRM	Use of non-renewable primary energy resources used as raw materials (MJ)
PENRT	Total use of non-renewable primary energy resources (MJ)
SM	Use of secondary material (kg)
RSF	Use of renewable secondary fuels (MJ)
NRSF	Use of non-renewable secondary fuels (MJ)
FW	Use of net fresh water (m ³)
Waste Indicators	
HW	Hazardous Waste (disposed) (kg)
NHW	Non-Hazardous Waste (disposed) (kg)
RW	Radioactive Waste (disposed) (kg)
Output Flow Indicators	
CFR	Components for Reuse (kg)
MR	Material for Recycling (kg)
MER	Materials for Energy Recovery (kg)
EEE	Exported Energy. Electricity (MJ)

EET	Exported Energy. Thermal (MJ)
Lifecycle Stages / Modules	
A1	Raw material supply
A2	Transport
A3	Manufacturing
A4	Transport to site
A5	Construction/Installation
B1	Use
B2	Maintenance
B3	Repair
B4	Replacement
B5	Refurbishment
B6	Operational energy use
B7	Operational water use
C1	Deconstruction/Demolition
C2	Transport to waste processing
C3	Waste processing
C4	Disposal
D	Reuse-Recovery-Recycling potential
Other Relevant Terms	
SVHC	Substances of Very High Concern
EC No.	European Community Number
CAS No.	Chemical Abstracts Service Number
MJ	Megajoule
kg	Kilogram
m ³	Cubic Meter
NM VOC	Non-Methane Volatile Organic Compounds
Sb eq.	Antimony Equivalents
P eq.	Phosphorus Equivalents
N eq.	Nitrogen Equivalents
CFC-11 eq.	Chlorofluorocarbon-11 Equivalents
CO ₂ eq.	Carbon Dioxide Equivalents
kg C	Kilograms of Carbon
kg CO ₂ eq.	Kilograms of Carbon Dioxide Equivalent
ND	Not Declared

REFERENCES

EN 15804: SUSTAINABILITY OF CONSTRUCTION WORKS - ENVIRONMENTAL PRODUCT DECLARATIONS
- CORE RULES FOR THE PRODUCT CATEGORY OF CONSTRUCTION PRODUCTS
GENERAL PROGRAMME INSTRUCTIONS OF THE INTERNATIONAL EPD® SYSTEM. VERSION 5.0
ISO 14025 ENVIRONMENTAL LABELS AND DECLARATIONS - TYPE III ENVIRONMENTAL DECLARATIONS -
PRINCIPLES AND PROCEDURES
ISO 14044 ENVIRONMENTAL MANAGEMENT – LIFE CYCLE ASSESSMENT – REQUIREMENTS AND
GUIDELINES
PCR 2019:14 CONSTRUCTION PRODUCTS (EN 15804: A2), VERSION 2.0.1
CANADA ENERGY MIX - IEA WEBSITE - TOTAL ENERGY SUPPLY (TES) BY SOURCE

VERSION HISTORY

Original Version of the EPD. 2026-01-09



INTERNATIONAL EPD SYSTEM

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