## GENERAL PURPOSE PORTLAND CEMENT (ULTRACEM) EPD

**NEW ZEALAND - ULTRACEM** 

Managed By: Holcim NZ Ltd EPD Process Certificate No. 1012 Verified Accreditation Body: Epsten Group, Inc. EPD Registration No. S-P-00850 Publication Date: 2019-08-19 Version Date: 2023-07-26 Valid Until: 2028-07-26 Revision Number: 2.0 Geographical Scope: New Zealand











## CONTENTS

INTRODUCTION	1
ABOUT HOLCIM NEW ZEALAND	2
LOW CARBON CEMENT IN NEW ZEALAND	3
LCA INFORMATION	4
EPD PRODUCT DESCRIPTION AND USE	7
ENVIRONMENTAL PERFORMANCE	9
PREVIOUS VERSION	155
REFERENCES	156
PROGRAM-RELATED INFORMATION AND VERIFICATION	177

Revision Number	Revision Date	Description of Changes
2.0	2023-07-26	Update of LCA using Process Calculator

### INTRODUCTION

Cement is a key ingredient in the most commonly used building material in the world. Each year in New Zealand, over 1.5 million tonnes of traditional cement is used, generating 1.23 million tonnes of CO<sub>2</sub>.<sup>1</sup>

This clearly demonstrates both the essential need for construction materials now and in the future, as well as the necessity for the construction materials industry to be a leading part of the solution addressing climate change.

With Aotearoa committed to net zero by 2050, Holcim New Zealand is building progress for a lower carbon footprint in the built environment.

For us, building progress means a complete range of low carbon, high-performance, and specialty cement and cement binders suitable for Aotearoa's homes, buildings, and infrastructure. It means advice, tools and resources to help you specify your next project with confidence. It means solutions that are right for you each and every time.

Together, we can build better to help decarbonise Aotearoa.

<sup>&</sup>lt;sup>1</sup> International Energy Agency (IEA) report *"The Future of Cement in a Carbon-Constrained World"* (2018); Cement and Concrete Association of New Zealand - Key Facts and Figures; The International Energy Agency (IEA) Cement Technology Roadmap 2009 estimates that the production of 1 tonne of cement results in the emission of approximately 0.82 tonnes of CO<sub>2</sub>. Using the conversion factor of 0.82 tonnes of CO<sub>2</sub> per tonne of cement, the production of 1.5 million tonnes of cement in New Zealand would result in the emission of approximately 1.23 million tonnes of CO<sub>2</sub>. The actual amount of CO<sub>2</sub> emissions may vary.

## ABOUT HOLCIM NEW ZEALAND

#### **BUILDING PROGRESS**

Holcim New Zealand (NZ) is a leading solutions provider for your design and construction needs in New Zealand, dating back to 1888. Today, we supply essential construction materials from import terminals, depots, and quarries to customers. Our cement and aggregates are used in ready-mix concrete, engineered precast concrete, and prestressed concrete solutions for various projects throughout the country.

This EPD provides our stakeholders with confidence about the environmental impact of our products.

Globally, Holcim is 60,000 people around the world who are passionate about building progress for people and the planet through four business segments: Cement, Ready-Mix Concrete, Aggregates and Solutions & Products.

Sustainability is at the core of our global strategy, with our industry's first 2030 and 2050 net-zero targets validated by the Science Based Targets initiative for all scopes. We are leading the transition towards low-carbon construction and driving a circular economy by providing materials and solutions that are re-shaping the way our industry builds. Holcim NZ has developed a range of low carbon cements and cement replacements specifically for the New Zealand market.



## LOW CARBON CEMENT IN NEW ZEALAND

#### **HOLCIM NZ'S CEMENT AT A GLANCE**

Holcim NZ provides project-specific, on-demand Environmental Product Declarations (EPDs) to customers. This capability represents a significant step in Holcim NZ's sustainability journey and embodies our multi-disciplinary approach to embedding sustainability into our organisation and operations. With the introduction of our cement blends, third-party verified data will underpin our capability to work with our customers from tender through to design and construction to optimise sustainability performance.

Holcim NZ's cement blend is backed by an EPD Process Certification. It's not only a first for cement, but a first for any product in New Zealand. Our EPD Process Certification is a stamp of approval to produce compliant EPDs inhouse, opening up significant capability and flexibility in producing and using life cycle impact data to inform our operations and our customers.

To gain our EPD Process Certification, Holcim invested in embedding Life Cycle Assessment (LCA) into our systems and processes. We have satisfied a rigorous, third-party evaluation in accordance with the relevant ISO standards and guidelines of the International EPD Program and EPD Australasia. <sup>2</sup>

This EPD has been developed using our EPD Process Certification for GENERAL PURPOSE PORTLAND CEMENT (ULTRACEM) with production occurring within New Zealand.



<sup>&</sup>lt;sup>2</sup> 5-6 and 8-12 in the References section.

### LCA INFORMATION

#### **Declared Unit**

1 tonne of cement blend.

#### **Reference Service Life (RSL)**

The RSL is not specified as the scope is from cradle to gate with distribution (module A4) option.

#### **Time Representativeness**

The plant data for the LCA is based on 2021 calendar year production data. The mix data for the LCA is based on 2023 calendar year production data.

#### **Databases and LCA Software Used**

SimaPro® LCA software (v 9.4) was used for the LCA modelling which developed the LCA Calculator, used as per the certified EPD Process. It uses background data from:

- The Australian Life Cycle Inventory Database (AusLCI v1.39) (2022)<sup>3</sup>
- 2. Ecoinvent 3.8 (2021)

The environmental impacts modelled from the existing EPDs do not include impacts for the additional Green Star (v1.2) impact categories included in the environmental impact tables. The following impact categories were calculated manually for the foreground data:

- Use of renewable primary energy resources used as raw materials
- Use of non-renewable primary energy, excluding nonrenewable primary energy resources used as raw materials
- Use of secondary materials
- Use of renewable secondary fuels
- Use of non-renewable secondary fuels

#### **Allocation**

Allocation was necessary to proportion inputs and outputs to intermediate flows and processes at the plant level. As much as possible, intermediate flows were allocated physically based on the weight of cement.

Ground granulated blast furnace slag from steel blast furnace production was allocated economically. Please refer to the "Recycled Material" section for further detail.

#### **Cut-Off Criteria**

No flows were excluded on the basis of cut-off criteria.

#### Address and Contact Information

Holcim (New Zealand) Ltd 23 Plumer Street, Central Auckland 1010 New Zealand

www.holcim.co.nz

<sup>&</sup>lt;sup>3</sup> Australian Life Cycle Inventory Database Initiative (AusLCI). (2022). Guidelines for Data Development for an Australian Life Cycle Inventory Database, Data Standard.

#### **Data Quality**

Data quality for the foreground data was assessed in terms of geographic and temporal representativeness. All data sources were scored medium or higher.

Background data sources were also assessed with respect to their timeliness, with all data sources being updated within the 10 years required under PCR 2019:14.

#### **SYSTEM DIAGRAM**

The processes included in the LCA are presented in a process diagram in the figure below.



## DESCRIPTION OF SYSTEM BOUNDARIES AND EXCLUDED LIFECYCLE STAGES

The scope of the LCA and EPD is from cradle to gate (A1-A3). Life cycle stages beyond Holcim's gate are excluded from the LCA (see figure below).

Environmental impacts relating to personnel, infrastructure and production equipment not directly consumed in the process are excluded from the system boundary as per the Product Category Rules

(2019:14 Construction Production and Construction Services).

Pro	Product Stage			uction ige		Use Stage						I	End of L	ife Stage	e	Benefits & loads for the next product system
Raw Material Supply	Transport	Manufacturing	Transport	Construction/Installation process	Use	Maintenance incl. transport	Repair incl. transport	Replacement incl. transport	Refurbishment incl. transport	Operational Energy Use	Operational Water Use	De-construction & Demolition	Transport	Re-use Recycling	Final Disposal	Reuse, Recovery Recycling potential
A1	A2	А3	A4	A5	B1	B2	В3	В4	B5	В6	В7	C1	C2	СЗ	C4	D
Х	х	х	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

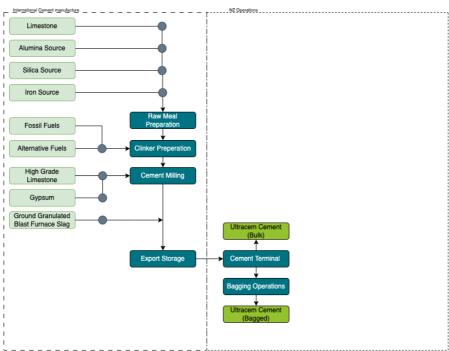
ND: Module not declared

# EPD PRODUCT DESCRIPTION AND USE

## HOLCIM NZ'S CEMENTITIOUS PRODUCTS (NEW ZEALAND - GENERAL PURPOSE PORTLAND CEMENT (ULTRACEM)

A detailed breakdown of the functional properties of the cement included in this EPD are provided below. Product environmental information should only be compared with consideration of the product's requisite function.

#### Manufacturing process and flow diagram



	MIX DESCRIPTIONS									
Region	Plant	Product brand	Description of use							
North Island	Auckland	Ultracem	General Purpose Cement (Type GP)							
North Island	Onehunga	Ultracem	General Purpose Cement (Type GP)							
North Island	Hamilton	Ultracem	General Purpose Cement (Type GP)							
North Island	Napier	Ultracem	General Purpose Cement (Type GP)							
North Island	Wellington	Ultracem	General Purpose Cement (Type GP)							
South Island	Timaru	Ultracem	General Purpose Cement (Type GP)							
South Island	Lyttelton	Ultracem	General Purpose Cement (Type GP)							
South Island	Dunedin	Ultracem	General Purpose Cement (Type GP)							

#### **Content Declaration**

The following table provides a summary of the materials included in Holcim's cement and their relative composition by weight. The gross weight of this declared material makes up a minimum of 99% of the products covered by this EPD.

#### **Packaging**

Holcim cement is delivered in either bulk or packaging.

#### **Recycled Material**

BS EN 16757:2017 specifically lists the following materials relevant to the study as co-products:

- Fly ash;
- Ground granulated blast furnace slag; and

As such, the above materials are considered as co-products of their production process and the impacts for their production process are allocated according to PCR 2019:14 Construction Products and Construction Services (co-produced goods, multi-output allocation).

Default background data from LCA databases was used to model the above co-products:

- Fly ash: AusLCI process for fly ash treats it as a waste material and only includes transport impacts.
- Ground granulated blast furnace slag: the AusLCI process for slag is allocated based on economic value, as the product has a significant economic value at the point of collection.

The allocation approach of the AusLCI LCA database was adopted as a default for secondary data and processes (eg. secondary fuel in cement production). The AusLCI dataset conforms to EN 15804 when applying allocation to its various processes and sub-processes.

Item	Hazardous Content	Mass (%)	Post-consumer material (%)	Renewable Material (%)
Portland Cement	✓	100%	0	0
- Clinker		≥ 85	0	0
- GGBFS		≤ 5	0	0
- High Grade Limestone		≥ 3	0	0
- Gypsum		3-5	0	0

# ENVIRONMENTAL PERFORMANCE

The environmental impacts considered in this EPD are listed in the table below. All further tables from this point will contain abbreviation only.

Impact Category	Abbreviation	Measurement	
Potential Environmental Impacts			
Total global warming potential	GWPT	kg CO₂ equivalents (GWP100)	
Global warming potential (fossil)	GWPF	kg CO <sub>2</sub> equivalents (GWP100)	
Global warming potential (biogenic)	GWPB	kg CO₂ equivalents (GWP100)	
Global warming potential (land use/ land transformation)	GWPL	kg CO₂ equivalents (GWP100)	
Ozone depletion potential	ODP	kg CFC 11 equivalents	
Acidification potential	AP	mol H+ eq.	
Eutrophication – aquatic freshwater	EP - freshwater	kg PO43- equivalents	
Eutrophication – aquatic freshwater	EP - freshwater	kg P equivalent	
Eutrophication – aquatic marine	EP - marine	kg N equivalent	
Eutrophication – terrestrial	EP – terrestrial	mol N equivalent	
Photochemical ozone creation potential	POCP	kg NMVOC equivalents	
Abiotic depletion potential (elements)	ADPE	kg Sb equivalents	
Abiotic depletion potential (fossil fuels)	ADPF	MJ net calorific value	
Water Depletion Potential	WDP	m3 equivalent deprived	
Resource use			
Use of renewable primary energy excluding renewable primary energy resources used as raw materials	PERE	MJ, net calorific value	
Use of renewable primary energy resources used as raw materials	PERM	MJ, net calorific value	
Total use of renewable primary energy resources (primary energy and primary energy resources used as raw materials)	PERT	MJ, net calorific value	
Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials	PENRE	MJ, net calorific value	
Use of non-renewable primary energy resources used as raw materials	PENRM	MJ, net calorific value	
Total use of non-renewable primary energy resources (primary energy and primary energy resources used as raw materials)	PENRT	MJ, net calorific value	
Use of secondary material	SM	kg	
Use of renewable secondary fuels	RSF	MJ, net calorific value	
Use of non-renewable secondary fuels	NRSF	MJ, net calorific value	
Use of net fresh water	FW	m3	
Waste categories and Output flows			
waste categories and output nows	LIME	kg	
Hazardous waste disposed	HWD		
	NHWD	kg	
Hazardous waste disposed		kg kg	

Impact Category	Abbreviation	Measurement
Materials for recycling	MFR	kg
Materials for energy recovery	MFEE	kg
Exported energy	EE - e	MJ per energy carrier
Exported energy, thermal	EE-t	MJ per energy carrier
Additional environmental impacts		
Global warming potential, excluding biogenic uptake, emissions and storage	GWP-GHG	kg CO <sub>2</sub> equivalents (GWP100)
Particulate matter	PM	disease incidence
Ionising radiation - human health	IRP	kBq U-235 eq
Eco-toxicity (freshwater)	ETP-fw	CTUe
Human toxicity potential - cancer effects	HTP-c	CTUh
Human toxicity potential - non cancer effects	HTP-nc	CTUh
Soil quality	SQP	dimensionless

Primary indicators - 1 tonne of cement

							E	NVIRONMEN	TAL IMPACT	S					
		GWP - F	GWP - B	GWP - Luluc	GWP-T	ODP	АР	EP-F	EP - F2	EP - M	EP-T	POCP	ADP	ADPF	WDP
Plant	Product brand	kg CO₂ eq	kg CO₂ eq	kg CO₂ eq	kg CO₂ eq	kg CFC-11 eq	mol H+ eq	kg PO4. 3- eq	kg P eq	kg N eq	mol N eq	kg NMVOC eq	kg Sb eq	MJ	m3 eq deprived
Auckland	Ultracem	861.89	4.18E-02	7.70E-02	862.01	2.07E-05	3.65	0.70	6.77E-01	0.40	11.92	2.91	-1.74E-04	2399.69	16.69
Onehunga	Ultracem	863.65	4.29E-02	7.70E-02	863.77	2.10E-05	3.66	0.70	6.77E-01	0.41	11.94	2.91	-1.73E-04	2423.25	16.90
Hamilton	Ultracem	872.70	4.52E-02	7.70E-02	872.82	2.24E-05	3.69	0.70	6.77E-01	0.42	12.05	2.94	-1.71E-04	2544.21	18.00
Napier	Ultracem	876.29	1.16E-01	7.96E-02	876.49	2.27E-05	3.98	0.71	6.80E-01	0.47	12.67	3.10	-1.82E-04	2601.51	464.91
Wellington	Ultracem	873.10	1.18E-01	7.96E-02	873.30	2.23E-05	3.89	0.71	6.79E-01	0.46	12.48	3.05	-1.82E-04	2555.04	294.95
Timaru	Ultracem	867.88	1.17E-01	7.95E-02	868.07	2.15E-05	3.76	0.71	6.78E-01	0.43	12.18	2.98	-1.83E-04	2479.05	17.01
Lyttelton	Ultracem	870.25	1.16E-01	7.96E-02	870.44	2.19E-05	3.82	0.71	6.79E-01	0.44	12.32	3.01	-1.82E-04	2513.54	143.15
Dunedin	Ultracem	869.85	1.17E-01	7.96E-02	870.04	2.18E-05	3.81	0.71	6.79E-01	0.44	12.30	3.01	-1.82E-04	2507.70	121.77

#### Resource use parameters - 1 tonne of cement

			RESOURCE USE								
		PERE	PERM	PERT	PENRE	PENRM	PENRT	SM	RSF	NRSF	FW
Plant	Product brand	МЈ	МЈ	МЈ	МЈ	МЈ	МЈ	kg	МЈ	МЈ	m3
Auckland	Ultracem	7.4E+01	0.0E+00	7.4E+01	2.6E+03	0.0E+00	2.6E+03	3.0E+02	4.4E+01	4.0E+02	6.1E+01
Onehunga	Ultracem	7.4E+01	0.0E+00	7.4E+01	2.7E+03	0.0E+00	2.7E+03	3.0E+02	4.4E+01	4.0E+02	6.1E+01
Hamilton	Ultracem	7.4E+01	0.0E+00	7.4E+01	2.8E+03	0.0E+00	2.8E+03	3.0E+02	4.4E+01	4.0E+02	6.1E+01
Napier	Ultracem	1.7E+02	0.0E+00	1.7E+02	2.9E+03	0.0E+00	2.9E+03	3.0E+02	4.4E+01	4.0E+02	6.4E+01
Wellington	Ultracem	1.7E+02	0.0E+00	1.7E+02	2.8E+03	0.0E+00	2.8E+03	3.0E+02	4.4E+01	4.0E+02	6.4E+01
Timaru	Ultracem	1.7E+02	0.0E+00	1.7E+02	2.7E+03	0.0E+00	2.7E+03	3.0E+02	4.4E+01	4.0E+02	6.4E+01
Lyttelton	Ultracem	1.7E+02	0.0E+00	1.7E+02	2.8E+03	0.0E+00	2.8E+03	3.0E+02	4.4E+01	4.0E+02	6.4E+01
Dunedin	Ultracem	1.7E+02	0.0E+00	1.7E+02	2.8E+03	0.0E+00	2.8E+03	3.0E+02	4.4E+01	4.0E+02	6.4E+01

#### Waste categories and output flows - 1 tonne of cement

			WASTE CATEGORIES AND OUTPUT FLOWS							
		HWD	NHWD	RWD	CRU	MFR	MFRE	EE - e	EE - t	
Plant	Product brand	kg	kg	kg	kg	kg	kg	МЈ	МЭ	
Auckland	Ultracem	7.68E-04	3.36E+00	5.19E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Onehunga	Ultracem	7.78E-04	3.38E+00	5.19E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Hamilton	Ultracem	8.27E-04	3.51E+00	5.19E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Napier	Ultracem	9.27E-04	8.19E-02	5.66E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Wellington	Ultracem	8.98E-04	5.08E-02	5.60E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Timaru	Ultracem	8.51E-04	0.00E+00	5.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Lyttelton	Ultracem	8.73E-04	2.31E-02	5.54E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Dunedin	Ultracem	8.69E-04	1.92E-02	5.54E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	

#### Additional indicators 1 tonne of cement

				ADDITIONAL I	ENVIRONMEN	ITAL IMPACT	s	
		GWP-GHG	PM	IRP	ETP - fw	HTP - c	HTP - nc	SQP
Plant	Product brand	kg CO₂ eq	disease incidence	kBq U-235 eq	CTUe	CTUh	CTUh	Pt
Auckland	Ultracem	0.00	1.85E-05	4.79E+03	5.83E+02	1.34E-06	5.76E-05	0.00E+00
Onehunga	Ultracem	1.75	1.85E-05	4.79E+03	5.95E+02	1.34E-06	5.76E-05	3.81E+00
Hamilton	Ultracem	10.72	1.87E-05	4.79E+03	6.56E+02	1.34E-06	5.76E-05	2.34E+01
Napier	Ultracem	8.31	1.89E-05	4.79E+03	7.50E+02	1.34E-06	5.77E-05	1.93E+01
Wellington	Ultracem	5.16	1.88E-05	4.79E+03	7.26E+02	1.34E-06	5.77E-05	1.20E+01
Timaru	Ultracem	0.00	1.87E-05	4.79E+03	6.88E+02	1.34E-06	5.76E-05	0.00E+00
Lyttelton	Ultracem	2.34	1.87E-05	4.79E+03	7.05E+02	1.34E-06	5.76E-05	5.44E+00
Dunedin	Ultracem	1.94	1.87E-05	4.79E+03	7.02E+02	1.34E-06	5.76E-05	4.52E+00

### **PREVIOUS VERSION**

Version 1 of GENERAL PURPOSE PORTLAND CEMENT (ULTRACEM) EPD, was generated using Primary LCA data from 2017. This EPD was generated in compliance with the requirements of comparability set out in EN 15804:2012+A1 and against the product category rules for Cement and Building Lime (EN 16908:2017)- 2012:01- SUB-PCR-H, 201811-22.

### REFERENCES

- 1. Australasian EPD Program. (2017). Guidance on the use of INA in EPDs.
- 2. Australasian EPD Program. (2018). Guidance on the use of background LCI data.
- 3. Australasian EPD Program (2019) Instructions of the Australasian EPD Program V3.01.
- 4. Australian Life Cycle Inventory Database Initiative (AusLCI). (2022). Guidelines for Data Development for an Australian Life Cycle Inventory Database, Data Standard.
- British Standards Institution. (2019). Sustainability of construction works. Environmental product declarations. Core rules for the product category of construction products, BS EN 15804:2012+A2:2019. British Standards Institution.
- British Standards Institution. (2017). Sustainability of construction works Environmental product declarations – Product Category Rules for concrete and concrete elements, BS EN 16757:2017. British Standards Institution.
- Ecoinvent Centre. (2019). Ecoinvent version 3 database. Zurich: ETH, Agroscope, EMPA, EPFL, PSI. Retrieved from www.ecoinvent.org.
- 8. EPD International. (2019). General Program Instructions (GPI) for the International EPD System V4.0. Retrieved from www.envirodec.com.
- 9. EPD International. (2021). Product Category Rules for Construction Products and Construction Services, PCR2019:14 v1.11. Stockholm: EPD International.
- ISO. (2006). Environmental labels and declarations Type III environmental declarations Principles and procedures, ISO 14025:2006. Geneva: International Organization for Standardization.
- 11. ISO. (2006). Environmental management Life cycle assessment Principles and framework, ISO 14040:2006. Geneva: International Organization for Standardization.
- 12. ISO. (2018). Environmental management. Life cycle assessment. Requirements and guidelines, ISO 14044:2006+A1:2018. Geneva: International Organization for Standardization.
- 13. AusLCI. (2018) AusLCI Database. Retrieved from AusLCI: www.auslci.com.au/
- 14. Man Yu, Thomes Wiedmann, Robert Crawford, Catriona Tait, 'The Carbon Footprint of New Zealand's Construction Sector', Procedia Engineering, Volume 180, 2017, Pages 211-220, ISSN 1877-7058, (http://www.sciencedirect.com/science/article/pii/S1877705817316879)

## PROGRAM-RELATED INFORMATION AND VERIFICATION

Declaration Owner	<b>₽</b> HOLCIM	Holcim (New Zealand) Ltd 23 Plumer Street, Central Auckland 1010, New Zealand www.holcim.co.nz
EPD Program Operator	AUSTRALASIA EPD® ENVIRONMENTAL PRODUCT DECLARATION	EPD Australasia Limited 315a Hardy Street Nelson 7010, New Zealand www.epd-australasia.com   info@epd-australasia.com +61 2 8005 8206
EPD Produced by	HOLCIM	Holcim (New Zealand) Ltd 23 Plumer Street, Central Auckland, New Zealand www.holcim.co.nz
EPD Process Certified by	<b>epsten</b> group <b></b>	Epsten Group Suite 2600, 101 Marietta St NW, Atlanta, Georgia 30303, USA www.epstengroup.com
EPD Registration Number	S-P-00850	
Version Date	2023-07-26	
Version	2.0	
Valid Until	2028-07-26	
Product category rules	PCR 2019:14 Construction Produ	acts and Construction Services, Version 1.2.5, 2022-06-22
Product group classification	UN CPC 374	
Geographical Scope	New Zealand	
Reference Year for Data	2021 Plant Data, 2023 Production	n Year

#### CEN standard EN 15804:2012+a1:2013 served as the core PCR

Product category rules	PCR 2019:14 Construction Products and Construction Services, Version 1.2.5, 2022-06-22
PCR review was conducted by	The Technical Committee of the International EPD® System. Chair: Claudia A. Peña. Contact via info@environdec.com
Independent third-party verification of the declaration and data, according to ISO 14025:2006:	<ul> <li>☑ EPD process certification</li> <li>☐ EPD verification</li> </ul>
EPD Process Certified by	Epsten Group, Inc. Accredited by: A2LA, Certificate #3142.03
Procedure for follow-up of data during EPD validity involves third party verifier:	⊠ Yes □ No

#### Programme-related information and verification

The EPD owner has the sole ownership, liability, and responsibility for the EPD. EPDs within the same product category but from different programmes may not be comparable. EPDs of construction products may not be comparable if they do not comply with EN 15804.

Contact your Holcim representative today for more information.

Holcim (New Zealand) Ltd 23 Plumer Street Central Auckland New Zealand

T 0800 465 246 www.holcim.co.nz

This publication supersedes all previous literature on this subject. As the specifications and details contained in this publication may change, please check with Holcim Customer Service for confirmation of current issue. This publication provides general information only and is no substitute for professional technical engineering advice. Users must make their own determination as to the suitability of this information or any Holcim product for their specific circumstances. Holcim accepts no liability for any loss or damage resulting from their specific circumstances. Holcim accepts no liability for any loss or damage resulting from any reliance on the information provided in this publication. Holcim is a registered trademark of Holcim Ltd.

© July 2023 Holcim (New Zealand) Ltd All rights reserved. This guide or any part of it may not be reproduced

