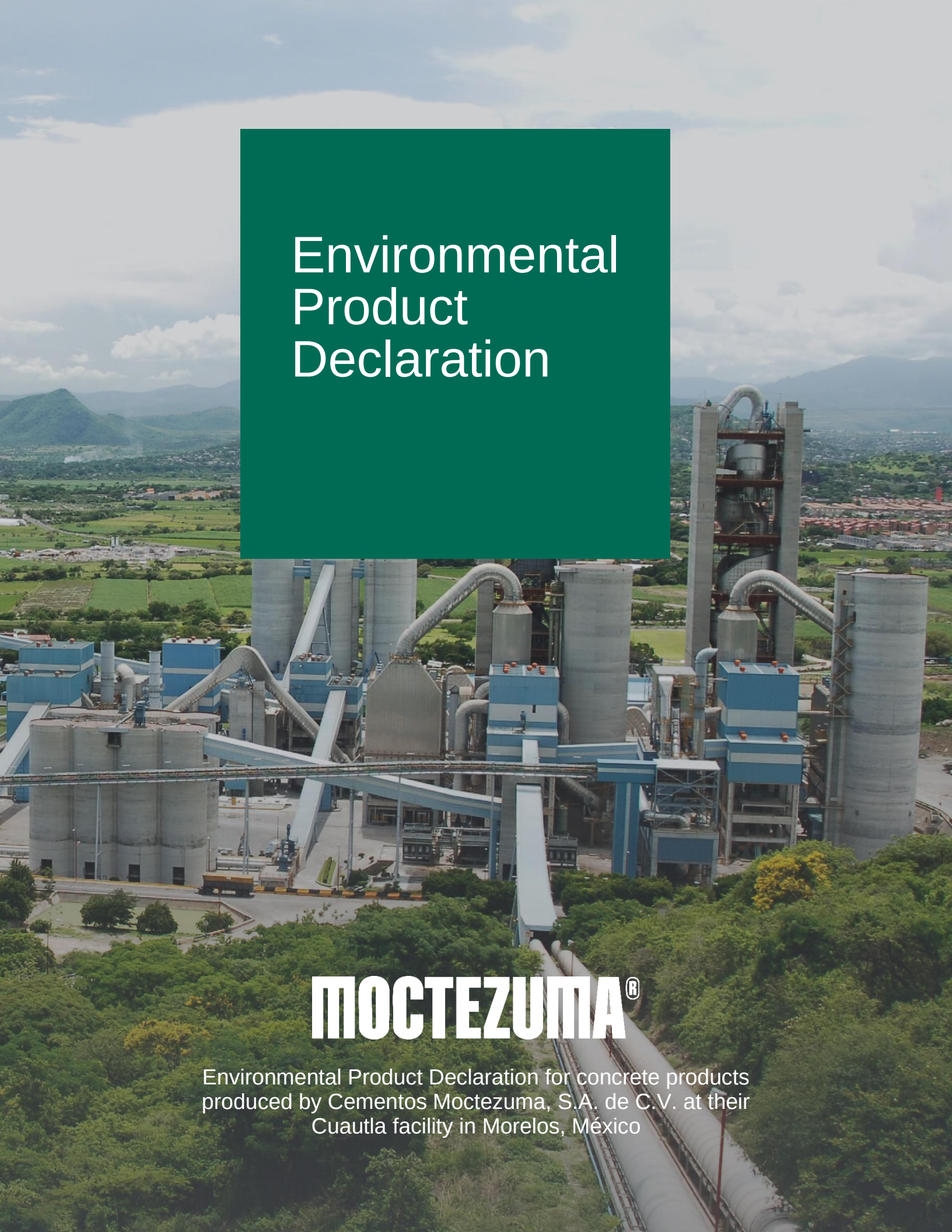

Environmental Product Declaration

MOCTEZUMA®

Environmental Product Declaration for concrete products produced by Cementos Moctezuma, S.A. de C.V. at their Cuautla facility in Morelos, México

ADMINISTRATIVE INFORMATION

International Certified Environmental Product Declaration

Declared Product:	This Environmental Product Declaration (EPD) covers ready mix concrete products produced by Cementos Moctezuma S.A. de C.V. Declared unit: 1 m3 of concrete
Declaration Owner:	Cementos Moctezuma S.A. de C.V. 134 PH Monte Elbruz, Col. Lomas de Chapultepec Ciudad de México, México www.cmoctezuma.com.mx Jair Juan Manuel Martínez Miguel, martinez.jair@cmoctezuma.com.mx
Program Operator:	Labeling Sustainability Address, 11670 W Sunset Blvd. Los Angeles, CA www.labelingsustainability.com
Product Category Rule:	ISO 21930:2017 Sustainability in Building Construction – Environmental Declaration of Building Products: serves as the core PCR Product Category Rule of Environmental Product Declarations PCR for Concrete serves as the sub-category PCR. PCR Program Operator: NSF International Sub-category PCR review was conducted by: Thomas P. Gloria, Ph. D. of Industrial Ecology Consultants: 35 Bracebridge, Rd., Newton, MA 02459-1728, t.gloria@industrial-ecology.com. Dr. Michael Overcash of Environmental Clarity: 2908 Chipmunk Lane, Raleigh, NC 27607-3117, mrovercash@earthlink.net. Mr. Bill Stough of Sustainable Research Group: PO Box 1684, Grand Rapids, MI 49501-1684, bstough@sustainableresearchgroup.com.
Independent LCA Reviewer and EPD Verifier:	This EPD was independently verified in accordance with ISO 14025 and ISO 21930. The life cycle assessment was independently reviewed in accordance ISO 14044 and the referenced PCR. Independent verification of the declaration, according to ISO 14025:2006 External Third Party Verifier Geoffrey Guest, Certified 3rd Party Verifier under the International EPD Program (www.environdec.com), CSA Group (www.csaregistries.ca)
Date of Issue:	25 November 2024
Period of Validity:	5 years; valid until 25 November 2029
EPD Number:	d49ee3e7-cb8a-40cc-91e7-7430b7a484d7

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COMPANY DESCRIPTION

Cementos Moctezuma is a prominent Mexican company established in 1943, specializing in the production, distribution, and marketing of cement, concrete, and aggregates under the well-known brands Cementos Moctezuma and Concretos Moctezuma. Listed on the Mexican Stock Exchange since 1988, the company maintains a strong financial position characterized by discipline and zero debt.

With three cement plants boasting an annual capacity of eight million tons and 30 concrete plants producing over 590 types of concrete, Cementos Moctezuma has an extensive distribution network of more than 530 centers, covering 95% of Mexico. The company also offers value-added services, including specialized technical advice, mobile laboratories, construction supervision, and training.

Cementos Moctezuma is committed to sustainable development, aligning its operations with the United Nations' Sustainable Development Goals through a strategy focused on five pillars: Safety and health, Energy and climate change, Corporate social responsibility, Environment and biodiversity, and Circular economy. The company emphasizes technological innovation and operational efficiency to produce high-quality products while minimizing environmental impact, including reducing CO_2 emissions and optimizing water use.

A qualified team of 1,303 passionate collaborators drives Cementos Moctezuma's mission to promote the construction of a better country for families and future generations while being committed to environmental stewardship. The company also champions equity and inclusion in the construction industry through initiatives like Casco Rosa, which recognizes the contributions of women in the sector. Additionally, Cementos Moctezuma actively engages in social responsibility programs to enhance the quality of life in the communities it serves, reinforcing its status as a consolidated company with deep Mexican roots.

STUDY GOAL

The intended application of this life cycle assessment (LCA) is to comply with the procedures for creating a Type III environmental product declaration (EPD) and publish the EPD for public review on the website, http://labelingsustainability.com/ . This level of study is in accordance with EPD Product Category Rule (PCR) for Ready Mix Concrete published by NSF International (2019) and is a sub-PCR of International Standards Organization (ISO) 21930:2017 Sustainability in buildings and civil works - Core rules for EPDs of construction products and services; International Standards Organization (ISO) 14025:2006 Environmental labels and declarations, Type III environmental declarations-Principles and procedures; ISO 14044:2006 Environmental management, Life cycle assessment- Requirements and guidelines; and ISO 14040:2006 Environmental management, Life cycle assessment-Principles and framework. The performance of this study and its subsequent publishing is in alignment with the business-to-business (B2B) communication requirements for the environmental assessment of building products. The study does not intend to support comparative assertions and is intended to be disclosed to the public.

This project report was commissioned to differentiate Cementos Moctezuma from their competition for the following reasons: generate an advantage for the organization; offer customers information to help them make informed product decisions; improve the environmental performance of Cementos Moctezuma by continuously measuring, controlling and reducing the environmental impacts of their products; help project facilitators working on Leadership in Energy and Environmental Design (LEED)

projects achieve their credit goal; and to strengthen Cementos Moctezuma's license to operate in the community. The intended audience for this LCA report is Cementos Moctezuma's employees, their suppliers, project specifiers of their products, architects, and engineers. The EPD report is also available for policy makers, government officials interested in sustainability, academic professors, and LCA professionals. This LCA report does not include product comparisons from other facilities.

DESCRIPTION OF PRODUCT AND SCOPE

This EPD reports on 142 concrete mixes manufactured at the Cementos Moctezuma concrete facility in Yecapixtla, Morelos, Mexico.

This LCA assumes the impacts from products manufactured in accordance with the standards outlined in this report. This LCA is a cradle-to-gate study, and therefore, stages extending beyond the plant gate are not included in this LCA. Excluded stages include transportation of the manufactured material to the construction site; on-site construction processes and components; building (infrastructure) use and maintenance; and "end-of-life" effects.

READY MIX CONCRETE DESIGN SUMMARY

The following tables provide a list of the ready-mix concrete products considered in this EPD along with key performance parameters.

Mix Designs: 0 to 15 MPa

Table 1: **Declared products with Mix designs: 0 to 15MPa considered in this environmental product declaration**

Mix#	Unique name/ID	Short description	Product type	Resistance strength, MPa	H2O to cement ratio
1	Relleno Fluido - f´c 15 - 7 dias	1.47 MPa 7d strength Ready Mix Concrete	Ready Mix Concrete	1.47	Proprietary
2	Relleno Fluido - f´c 15 - 3 dias	1.47 MPa 3d strength Ready Mix Concrete	Ready Mix Concrete	1.47	Proprietary
3	Relleno Fluido - f´c 15 - 28 dias	1.47 MPa 28d strength Ready Mix Concrete	Ready Mix Concrete	1.47	Proprietary
4	Relleno Fluido - f´c 15 - 14 dias	1.47 MPa 14d strength Ready Mix Concrete	Ready Mix Concrete	1.47	Proprietary
5	Relleno Fluido - f´c 20 - 7 dias	1.96 MPa 7d strength Ready Mix Concrete	Ready Mix Concrete	1.96	Proprietary
6	Relleno Fluido - f´c 20 - 3 dias	1.96 MPa 3d strength Ready Mix Concrete	Ready Mix Concrete	1.96	Proprietary
7	Relleno Fluido - f´c 20 - 28 dias	1.96 MPa 28d strength Ready Mix Concrete	Ready Mix Concrete	1.96	Proprietary

8	Relleno Fluido - f´c 20 - 14 dias	1.96 MPa 14d strength Ready Mix Concrete	Ready Mix Concrete	1.96	Proprietary
9	Relleno Fluido - f´c 25 - 7 dias	2.45 MPa 7d strength Ready Mix Concrete	Ready Mix Concrete	2.45	Proprietary
10	Relleno Fluido - f´c 25 - 3 dias	2.45 MPa 3d strength Ready Mix Concrete	Ready Mix Concrete	2.45	Proprietary
11	Relleno Fluido - f´c 25 - 28 dias	2.45 MPa 28d strength Ready Mix Concrete	Ready Mix Concrete	2.45	Proprietary
12	Relleno Fluido - f´c 25 - 14 dias	2.45 MPa 14d strength Ready Mix Concrete	Ready Mix Concrete	2.45	Proprietary
13	Relleno Fluido - f´c 30 - 7 dias	2.94 MPa 7d strength Ready Mix Concrete	Ready Mix Concrete	2.94	Proprietary
14	Relleno Fluido - f´c 30 - 3 dias	2.94 MPa 3d strength Ready Mix Concrete	Ready Mix Concrete	2.94	Proprietary
15	Relleno Fluido - f´c 30 - 28 dias	2.94 MPa 28d strength Ready Mix Concrete	Ready Mix Concrete	2.94	Proprietary
16	Relleno Fluido - f´c 30 - 14 dias	2.94 MPa 14d strength Ready Mix Concrete	Ready Mix Concrete	2.94	Proprietary
17	Relleno Fluido - f´c 40 - 7 dias	3.92 MPa 7d strength Ready Mix Concrete	Ready Mix Concrete	3.92	Proprietary
18	Relleno Fluido - f´c 40 - 3 dias	3.92 MPa 3d strength Ready Mix Concrete	Ready Mix Concrete	3.92	Proprietary
19	Relleno Fluido - f´c 40 - 28 dias	3.92 MPa 28d strength Ready Mix Concrete	Ready Mix Concrete	3.92	Proprietary
20	Relleno Fluido - f´c 40 - 14 dias	3.92 MPa 14d strength Ready Mix Concrete	Ready Mix Concrete	3.92	Proprietary
21	Relleno Fluido - f´c 50 - 7 dias	4.90 MPa 7d strength Ready Mix Concrete	Ready Mix Concrete	4.9	Proprietary
22	Relleno Fluido - f´c 50 - 3 dias	4.90 MPa 3d strength Ready Mix Concrete	Ready Mix Concrete	4.9	Proprietary
23	Relleno Fluido - f´c 50 - 28 dias	4.90 MPa 28d strength Ready Mix Concrete	Ready Mix Concrete	4.9	Proprietary
24	Relleno Fluido - f´c 50 - 14 dias	4.90 MPa 14d strength Ready Mix Concrete	Ready Mix Concrete	4.9	Proprietary

25	Relleno Fluido - f´c 60 - 7 dias	5.88 MPa 7d strength Ready Mix Concrete	Ready Mix Concrete	5.88	Proprietary
26	Relleno Fluido - f´c 60 - 3 dias	5.88 MPa 3d strength Ready Mix Concrete	Ready Mix Concrete	5.88	Proprietary
27	Relleno Fluido - f´c 60 - 28 dias	5.88 MPa 28d strength Ready Mix Concrete	Ready Mix Concrete	5.88	Proprietary
28	Relleno Fluido - f´c 60 - 14 dias	5.88 MPa 14d strength Ready Mix Concrete	Ready Mix Concrete	5.88	Proprietary
29	Relleno Fluido - f´c 70 - 7 dias	6.86 MPa 7d strength Ready Mix Concrete	Ready Mix Concrete	6.86	Proprietary
30	Relleno Fluido - f´c 70 - 3 dias	6.86 MPa 3d strength Ready Mix Concrete	Ready Mix Concrete	6.86	Proprietary
31	Relleno Fluido - f´c 70 - 28 dias	6.86 MPa 28d strength Ready Mix Concrete	Ready Mix Concrete	6.86	Proprietary
32	Relleno Fluido - f´c 70 - 14 dias	6.86 MPa 14d strength Ready Mix Concrete	Ready Mix Concrete	6.86	Proprietary
33	Convencional - f´c 100 - 7 dias	9.80 MPa 7d strength Ready Mix Concrete	Ready Mix Concrete	9.8	Proprietary
34	Convencional - f´c 100 - 3 dias	9.80 MPa 3d strength Ready Mix Concrete	Ready Mix Concrete	9.8	Proprietary
35	Convencional - f´c 100 - 28 dias	9.80 MPa 28d strength Ready Mix Concrete	Ready Mix Concrete	9.8	Proprietary
36	Convencional - f´c 100 - 14 dias	9.80 MPa 14d strength Ready Mix Concrete	Ready Mix Concrete	9.8	Proprietary
37	Convencional - f´c 150 - 7 dias	14.70 MPa 7d strength Ready Mix Concrete	Ready Mix Concrete	14.7	Proprietary
38	Convencional - f´c 150 - 3 dias	14.70 MPa 3d strength Ready Mix Concrete	Ready Mix Concrete	14.7	Proprietary
39	Convencional - f´c 150 - 28 dias	14.70 MPa 28d strength Ready Mix Concrete	Ready Mix Concrete	14.7	Proprietary
40	Convencional - f´c 150 - 14 dias	14.70 MPa 14d strength Ready Mix Concrete	Ready Mix Concrete	14.7	Proprietary

Mix Designs: 15 to 20 MPa

Table 2 **Declared products with Mix designs: 15 to 20MPa considered in this environmental product declaration**

Mix#	Unique name/ID	Short description	Product type	Resistance strength, MPa	H2O to cement ratio
41	Convencional - f´c 200 - 7 dias	19.60 MPa 7d strength Ready Mix Concrete	Ready Mix Concrete	19.6	Proprietary
42	Convencional - f´c 200 - 3 dias	19.60 MPa 3d strength Ready Mix Concrete	Ready Mix Concrete	19.6	Proprietary
43	Convencional - f´c 200 - 28 dias	19.60 MPa 28d strength Ready Mix Concrete	Ready Mix Concrete	19.6	Proprietary
44	Convencional - f´c 200 - 14 dias	19.60 MPa 14d strength Ready Mix Concrete	Ready Mix Concrete	19.6	Proprietary
45	Lanzado - f´c 200 - 7 dias	19.60 MPa 7d strength Ready Mix Concrete	Ready Mix Concrete	19.6	Proprietary
46	Lanzado - f´c 200 - 3 dias	19.60 MPa 3d strength Ready Mix Concrete	Ready Mix Concrete	19.6	Proprietary
47	Lanzado - f´c 200 - 28 dias	19.60 MPa 28d strength Ready Mix Concrete	Ready Mix Concrete	19.6	Proprietary
48	Lanzado - f´c 200 - 14 dias	19.60 MPa 14d strength Ready Mix Concrete	Ready Mix Concrete	19.6	Proprietary

Mix Designs: 21 to 25 MPa

Table 3: **Declared products with Mix designs: 21 to 25MPa considered in this environmental product declaration**

Mix#	Unique name/ID	Short description	Product type	Resistance strength, MPa	H2O to cement ratio
49	Convencional - f´c 250 - 7 dias	24.50 MPa 7d strength Ready Mix Concrete	Ready Mix Concrete	24.5	Proprietary

50	Convencional - f´c 250 - 3 dias	24.50 MPa 3d strength Ready Mix Concrete	Ready Mix Concrete	24.5	Proprietary
51	Convencional - f´c 250 - 28 dias	24.50 MPa 28d strength Ready Mix Concrete	Ready Mix Concrete	24.5	Proprietary
52	Convencional - f´c 250 - 14 dias	24.50 MPa 14d strength Ready Mix Concrete	Ready Mix Concrete	24.5	Proprietary
53	Estructural - f´c 250 - 7 dias	24.50 MPa 7d strength Ready Mix Concrete	Ready Mix Concrete	24.5	Proprietary
54	Estructural - f´c 250 - 3 dias	24.50 MPa 3d strength Ready Mix Concrete	Ready Mix Concrete	24.5	Proprietary
55	Estructural - f´c 250 - 28 dias	24.50 MPa 28d strength Ready Mix Concrete	Ready Mix Concrete	24.5	Proprietary
56	Estructural - f´c 250 - 14 dias	24.50 MPa 14d strength Ready Mix Concrete	Ready Mix Concrete	24.5	Proprietary
57	Modulo de ruptura - MR 35 - 7 dias	24.50 MPa 7d strength Ready Mix Concrete	Ready Mix Concrete	24.5	Proprietary
58	Modulo de ruptura - MR 35 - 3 dias	24.50 MPa 3d strength Ready Mix Concrete	Ready Mix Concrete	24.5	Proprietary
59	Modulo de ruptura - MR 35 - 28 dias	24.50 MPa 28d strength Ready Mix Concrete	Ready Mix Concrete	24.5	Proprietary
60	Modulo de ruptura - MR 35 - 14 dias	24.50 MPa 14d strength Ready Mix Concrete	Ready Mix Concrete	24.5	Proprietary
61	Lanzado - f´c 250 - 7 dias	24.50 MPa 7d strength Ready Mix Concrete	Ready Mix Concrete	24.5	Proprietary
62	Lanzado - f´c 250 - 3 dias	24.50 MPa 3d strength Ready Mix Concrete	Ready Mix Concrete	24.5	Proprietary
63	Lanzado - f´c 250 - 28 dias	24.50 MPa 28d strength Ready Mix Concrete	Ready Mix Concrete	24.5	Proprietary
64	Lanzado - f´c 250 - 14 dias	24.50 MPa 14d strength Ready Mix Concrete	Ready Mix Concrete	24.5	Proprietary

Mix Designs: 26 to 30 MPa

Table 4: **Declared products with Mix designs: 26 to 30MPa considered in this environmental product declaration**

Mix#	Unique name/ID	Short description	Product type	Resistance strength, MPa	H2O to cement ratio
65	Convencional - f´c 300 - 7 dias	29.40 MPa 7d strength Ready Mix Concrete	Ready Mix Concrete	29.4	Proprietary
66	Convencional - f´c 300 - 3 dias	29.40 MPa 3d strength Ready Mix Concrete	Ready Mix Concrete	29.4	Proprietary
67	Convencional - f´c 300 - 28 dias	29.40 MPa 28d strength Ready Mix Concrete	Ready Mix Concrete	29.4	Proprietary
68	Convencional - f´c 300 - 14 dias	29.40 MPa 14d strength Ready Mix Concrete	Ready Mix Concrete	29.4	Proprietary
69	Estructural - f´c 300 - 7 dias	29.40 MPa 7d strength Ready Mix Concrete	Ready Mix Concrete	29.4	Proprietary
70	Estructural - f´c 300 - 3 dias	29.40 MPa 3d strength Ready Mix Concrete	Ready Mix Concrete	29.4	Proprietary
71	Estructural - f´c 300 - 28 dias	29.40 MPa 28d strength Ready Mix Concrete	Ready Mix Concrete	29.4	Proprietary
72	Estructural - f´c 300 - 14 dias	29.40 MPa 14d strength Ready Mix Concrete	Ready Mix Concrete	29.4	Proprietary
73	Modulo de ruptura - MR 38 - 7 dias	26.60 MPa 7d strength Ready Mix Concrete	Ready Mix Concrete	26.6	Proprietary
74	Modulo de ruptura - MR 38 - 3 dias	26.60 MPa 3d strength Ready Mix Concrete	Ready Mix Concrete	26.6	Proprietary
75	Modulo de ruptura - MR 38 - 28 dias	26.60 MPa 28d strength Ready Mix Concrete	Ready Mix Concrete	26.6	Proprietary
76	Modulo de ruptura - MR 38 - 14 dias	26.60 MPa 14d strength Ready Mix Concrete	Ready Mix Concrete	26.6	Proprietary
77	Modulo de ruptura - MR 40 - 7 dias	28.00 MPa 7d strength Ready Mix Concrete	Ready Mix Concrete	28	Proprietary
78	Modulo de ruptura - MR 40 - 3 dias	28.00 MPa 3d strength Ready Mix Concrete	Ready Mix Concrete	28	Proprietary
79	Modulo de ruptura - MR 40 - 28 dias	28.00 MPa 28d strength Ready Mix Concrete	Ready Mix Concrete	28	Proprietary

80	Modulo de ruptura - MR 40 - 14 dias	28.00 MPa 14d strength Ready Mix Concrete	Ready Mix Concrete	28	Proprietary
81	Modulo de ruptura - MR 42 - 7 dias	29.40 MPa 7d strength Ready Mix Concrete	Ready Mix Concrete	29.4	Proprietary
82	Modulo de ruptura - MR 42 - 3 dias	29.40 MPa 3d strength Ready Mix Concrete	Ready Mix Concrete	29.4	Proprietary
83	Modulo de ruptura - MR 42 - 28 dias	29.40 MPa 28d strength Ready Mix Concrete	Ready Mix Concrete	29.4	Proprietary
84	Modulo de ruptura - MR 42 - 14 dias	29.40 MPa 14d strength Ready Mix Concrete	Ready Mix Concrete	29.4	Proprietary
85	Modulo de ruptura - MR 36 - 7 dias	25.20 MPa 7d strength Ready Mix Concrete	Ready Mix Concrete	25.2	Proprietary
86	Modulo de ruptura - MR 36 - 3 dias	25.20 MPa 3d strength Ready Mix Concrete	Ready Mix Concrete	25.2	Proprietary
87	Modulo de ruptura - MR 36 - 28 dias	25.20 MPa 28d strength Ready Mix Concrete	Ready Mix Concrete	25.2	Proprietary
88	Modulo de ruptura - MR 36 - 14 dias	25.20 MPa 14d strength Ready Mix Concrete	Ready Mix Concrete	25.2	Proprietary
89	Baja contracción - MR 38 - 28 dias	26.60 MPa 28d strength Ready Mix Concrete	Ready Mix Concrete	26.6	Proprietary
90	Baja contracción - MR 38 - 14 dias	26.60 MPa 14d strength Ready Mix Concrete	Ready Mix Concrete	26.6	Proprietary
91	Baja contracción - MR 40 - 28 dias	28.00 MPa 28d strength Ready Mix Concrete	Ready Mix Concrete	28	Proprietary
92	Baja contracción - MR 40 - 14 dias	28.00 MPa 14d strength Ready Mix Concrete	Ready Mix Concrete	28	Proprietary
93	Baja contracción - MR 42 - 28 dias	29.40 MPa 28d strength Ready Mix Concrete	Ready Mix Concrete	29.4	Proprietary
94	Baja contracción - MR 42 - 14 dias	29.40 MPa 14d strength Ready Mix Concrete	Ready Mix Concrete	29.4	Proprietary
95	Lanzado - f´c 300 - 7 dias	29.40 MPa 7d strength Ready Mix Concrete	Ready Mix Concrete	29.4	Proprietary
96	Lanzado - f´c 300 - 3 dias	29.40 MPa 28d strength Ready Mix Concrete	Ready Mix Concrete	29.4	Proprietary

97	Lanzado - f´c 300 - 28 dias	29.40 MPa 28d strength Ready Mix Concrete	Ready Mix Concrete	29.4	Proprietary
98	Lanzado - f´c 300 - 14 dias	29.40 MPa 28d strength Ready Mix Concrete	Ready Mix Concrete	29.4	Proprietary

Mix Designs: 31 to 35 MPa

Table 5: **Declared products with Mix designs: 31 to 35MPa considered in this environmental product declaration**

Mix#	Unique name/ID	Short description	Product type	Resistance strength, MPa	H2O to cement ratio
99	Convencional - f´c 350 - 7 dias	34.30 MPa 7d strength Ready Mix Concrete	Ready Mix Concrete	34.3	Proprietary
100	Convencional - f´c 350 - 3 dias	34.30 MPa 3d strength Ready Mix Concrete	Ready Mix Concrete	34.3	Proprietary
101	Convencional - f´c 350 - 28 dias	34.30 MPa 28d strength Ready Mix Concrete	Ready Mix Concrete	34.3	Proprietary
102	Convencional - f´c 350 - 14 dias	34.30 MPa 14d strength Ready Mix Concrete	Ready Mix Concrete	34.3	Proprietary
103	Estructural - f´c 350 - 7 dias	34.30 MPa 7d strength Ready Mix Concrete	Ready Mix Concrete	34.3	Proprietary
104	Estructural - f´c 350 - 3 dias	34.30 MPa 3d strength Ready Mix Concrete	Ready Mix Concrete	34.3	Proprietary
105	Estructural - f´c 350 - 28 dias	34.30 MPa 28d strength Ready Mix Concrete	Ready Mix Concrete	34.3	Proprietary
106	Estructural - f´c 350 - 14 dias	34.30 MPa 14d strength Ready Mix Concrete	Ready Mix Concrete	34.3	Proprietary
107	Modulo de ruptura - MR 45 - 7 dias	31.50 MPa 7d strength Ready Mix Concrete	Ready Mix Concrete	31.5	Proprietary
108	Modulo de ruptura - MR 45 - 3 dias	31.50 MPa 3d strength Ready Mix Concrete	Ready Mix Concrete	31.5	Proprietary
109	Modulo de ruptura - MR 45 - 28 dias	31.50 MPa 28d strength Ready Mix Concrete	Ready Mix Concrete	31.5	Proprietary
110	Modulo de ruptura - MR 45 - 14 dias	31.50 MPa 14d strength Ready Mix Concrete	Ready Mix Concrete	31.5	Proprietary

111	Modulo de ruptura - MR 48 - 7 dias	33.60 MPa 7d strength Ready Mix Concrete	Ready Mix Concrete	33.6	Proprietary
112	Modulo de ruptura - MR 48 - 3 dias	33.60 MPa 3d strength Ready Mix Concrete	Ready Mix Concrete	33.6	Proprietary
113	Modulo de ruptura - MR 48 - 28 dias	33.60 MPa 28d strength Ready Mix Concrete	Ready Mix Concrete	33.6	Proprietary
114	Modulo de ruptura - MR 48 - 14 dias	33.60 MPa 14d strength Ready Mix Concrete	Ready Mix Concrete	33.6	Proprietary
115	Baja contracción - MR 45 - 28 dias	31.50 MPa 28d strength Ready Mix Concrete	Ready Mix Concrete	31.5	Proprietary
116	Baja contracción - MR 45 - 14 dias	31.50 MPa 14d strength Ready Mix Concrete	Ready Mix Concrete	31.5	Proprietary
117	Baja contracción - MR 48 - 28 dias	33.60 MPa 28d strength Ready Mix Concrete	Ready Mix Concrete	33.6	Proprietary
118	Baja contracción - MR 48 - 14 dias	33.60 MPa 14d strength Ready Mix Concrete	Ready Mix Concrete	33.6	Proprietary
119	Lanzado - f´c 350 - 7 dias	34.30 MPa 7d strength Ready Mix Concrete	Ready Mix Concrete	34.3	Proprietary
120	Lanzado - f´c 350 - 3 dias	34.30 MPa 3d strength Ready Mix Concrete	Ready Mix Concrete	34.3	Proprietary
121	Lanzado - f´c 350 - 28 dias	34.30 MPa 28d strength Ready Mix Concrete	Ready Mix Concrete	34.3	Proprietary
122	Lanzado - f´c 350 - 14 dias	34.30 MPa 14d strength Ready Mix Concrete	Ready Mix Concrete	34.3	Proprietary

Mix Designs: 36 to 40 MPa

Table 6: **Declared products with Mix designs: 36 to 40MPa considered in this environmental product declaration**

Mix#	Unique name/ID	Short description	Product type	Resistance strength, MPa	H2O to cement ratio
123	Alta resistencia - f´c 400 - 7 dias	39.20 MPa 7d strength Ready Mix Concrete	Ready Mix Concrete	39.2	Proprietary
124	Alta resistencia - f´c 400 - 3 dias	39.20 MPa 3d strength Ready Mix Concrete	Ready Mix Concrete	39.2	Proprietary
125	Alta resistencia - f´c 400 - 28 dias	39.20 MPa 28d strength Ready Mix Concrete	Ready Mix Concrete	39.2	Proprietary

126	Alta resistencia - f´c 400 - 14 dias	39.20 MPa 14d strength Ready Mix Concrete	Ready Mix Concrete	39.2	Proprietary

Mix Designs: 41 to 45 MPa

Table 7: **Declared products with Mix designs: 41 to 45MPa considered in this environmental product declaration**

Mix#	Unique name/ID	Short description	Product type	Resistance strength, MPa	H2O to cement ratio
127	Alta resistencia - f´c 450 - 7 dias	44.10 MPa 7d strength Ready Mix Concrete	Ready Mix Concrete	44.1	Proprietary
128	Alta resistencia - f´c 450 - 3 dias	44.10 MPa 3d strength Ready Mix Concrete	Ready Mix Concrete	44.1	Proprietary
129	Alta resistencia - f´c 450 - 28 dias	44.10 MPa 28d strength Ready Mix Concrete	Ready Mix Concrete	44.1	Proprietary
130	Alta resistencia - f´c 450 - 14 dias	44.10 MPa 14d strength Ready Mix Concrete	Ready Mix Concrete	44.1	Proprietary

Mix Designs: 46 to 50 MPa

Table 7: **Declared products with Mix designs: 46 to 50MPa considered in this environmental product declaration**

Mix#	Unique name/ID	Short description	Product type	Resistance strength, MPa	H2O to cement ratio
131	Alta resistencia - f´c 500 - 7 dias	49.00 MPa 7d strength Ready Mix Concrete	Ready Mix Concrete	49	Proprietary
132	Alta resistencia - f´c 500 - 3 dias	49.00 MPa 3d strength Ready Mix Concrete	Ready Mix Concrete	49	Proprietary
133	Alta resistencia - f´c 500 - 28 dias	49.00 MPa 28d strength Ready Mix Concrete	Ready Mix Concrete	49	Proprietary
134	Alta resistencia - f´c 500 - 14 dias	49.00 MPa 14d strength Ready Mix Concrete	Ready Mix Concrete	49	Proprietary

Mix Designs: 51 to 55 MPa

Table 7: **Declared products with Mix designs: 51 to 55MPa considered in this environmental product declaration**

Mix#	Unique name/ID	Short description	Product type	Resistance strength, MPa	H2O to cement ratio
135	Alta resistencia - f´c 550 - 7 dias	53.90 MPa 7d strength Ready Mix Concrete	Ready Mix Concrete	53.9	Proprietary
136	Alta resistencia - f´c 550 - 3 dias	53.90 MPa 3d strength Ready Mix Concrete	Ready Mix Concrete	53.9	Proprietary
137	Alta resistencia - f´c 550 - 28 dias	53.90 MPa 28d strength Ready Mix Concrete	Ready Mix Concrete	53.9	Proprietary
138	Alta resistencia - f´c 550 - 14 dias	53.90 MPa 14d strength Ready Mix Concrete	Ready Mix Concrete	53.9	Proprietary

Mix Designs: 56 to 60 MPa

Table 7: **Declared products with Mix designs: 56 to 60MPa considered in this environmental product declaration**

Mix#	Unique name/ID	Short description	Product type	Resistance strength, MPa	H2O to cement ratio
139	Alta resistencia - f´c 600 - 7 dias	58.80 MPa 7d strength Ready Mix Concrete	Ready Mix Concrete	58.8	Proprietary
140	Alta resistencia - f´c 600 - 3 dias	58.80 MPa 3d strength Ready Mix Concrete	Ready Mix Concrete	58.8	Proprietary
141	Alta resistencia - f´c 600 - 28 dias	58.80 MPa 28d strength Ready Mix Concrete	Ready Mix Concrete	58.8	Proprietary
142	Alta resistencia - f´c 600 - 14 dias	58.80 MPa 14d strength Ready Mix Concrete	Ready Mix Concrete	58.8	Proprietary

READY MIX CONCRETE DESIGN COMPOSITION

The following figures provide mass breakdown (kg per functional unit) of the material composition of each ready mix concrete design considered. Please note that the presented breakdown has been randomly altered by +/-10%, and is therefore only an approximation; this manipulation is to ensure confidentiality.

Table 8: **Ready mix concrete composition.**

Product Components	Product Components
Cement	Proprietary
Aggregates	30–60.00
Others	0.01-5.00
Total	100.00

SYSTEM BOUNDARIES

The following figure depicts the cradle-to-gate system boundary considered in this study.

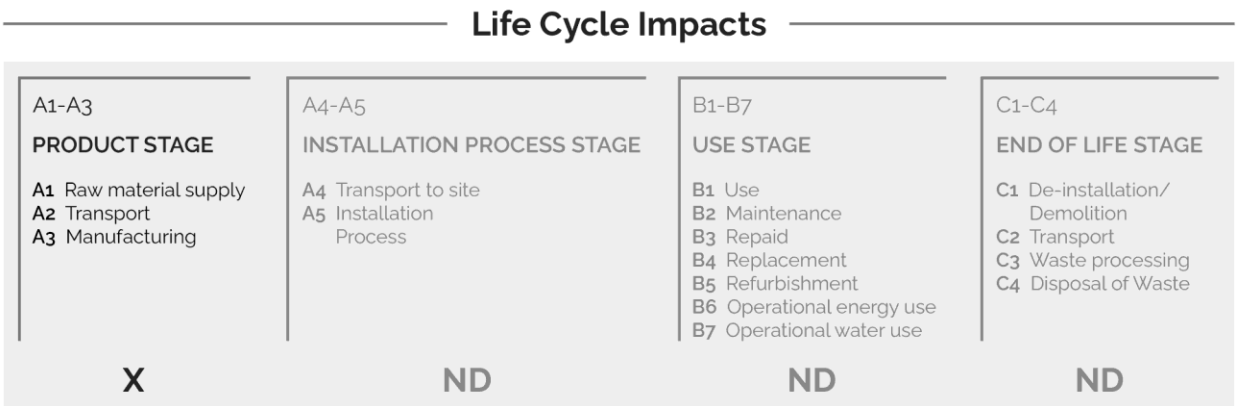

Figure 1: **General life cycle phases for consideration in a construction works system**

This is a Cradle-to-gate life cycle assessment and the following life cycle stages are included in the study:

- A1: Raw material supply (upstream processes) - Extraction, handling, and processing of the materials used in manufacturing the declared products in this LCA.
- A2: Transportation - Transportation of A1 materials from the supplier to the “gate” of the manufacturing facility (i.e., A3).
- A3: Manufacturing (core processes)- The energy and other utility inputs used to store, move, and manufacture the declared products and to operate the facility.

According to the PCR, the following figure illustrates the general activities and input requirements for producing ready mix concrete products and is not necessarily exhaustive.

System Boundary

Raw Material Supply (A1)	Transport (A2)	Manufacturing (A3)
Cements & SCMs Aggregates Admixtures Batch Water Fibers & Pigments	Truck, Rail, Ship Energy Carriers (fuels)	Energy Carriers (electricity and fuels) Ancillary Materials (lubricants, motor oil, cleaning chemicals, other consumables) Water (manufacturing water, including wash water for cement trucks, but excluding batch water) Waste (end of life treatment of ancillary materials and any packaging) 30% total fleet energy transit mix plants only

Figure 2: **General system inputs considered in the product system and categorized by modules in scope**

In addition, according to the relevant PCR, the following requirements are excluded from this study:

- Production, manufacture and construction of A3 building/capital goods and infrastructure.
- Production and manufacture of steel production equipment, steel delivery vehicles, earth-moving equipment, and laboratory equipment.
- Personnel-related activities (travel, furniture, office supplies);
- Energy use is related to company management and sales activities.

For this LCA the manufacturing plant, owned and operated by Cementos Moctezuma, is located at their Planta Cuautla facility in Mexico. All operating data is formulated using the actual data from Cementos Moctezuma's plant at the above location, including water, energy consumption and waste generation. All inputs for this system boundary are calculated for the plant.

This life cycle inventory was organized in a spreadsheet and was then input into an RStudio environment where pre-calculated LCIA results for relevant products/activities stemming from the ecoinvent v3.10 database and a local EPD database in combination with primary data from Cementos Moctezuma were utilized. Explanations of the contribution of each data source to this study are outlined in the section 'Data Sources and Quality'. Further LCI details for each declared product are provided in the sections 'Detailed LCI tables' and 'Transport tables' of the detailed LCA report. A parameter uncertainty analysis was also performed where key statistical results (e.g. min/mean/max etc.) are provided in the detailed LCA report.

CUT-OFF CRITERIA

ISO 14044:2006 and the focus PCR requires the LCA model to contain a minimum of 95% of the total inflows (mass and energy) to the upstream and core modules be included in this study. The cut-off criteria were applied to all other processes unless otherwise noted above as follows. A 1% cut-off is considered for all renewable and non-renewable primary energy consumption and the total mass of inputs within a unit process where the total of the neglected inputs does not exceed 5%.

DATA SOURCES AND DATA QUALITY ASSESSMENT

Raw material transport: A combination of actual mode/distance combinations were assumed for key bulk materials whereas ecoinvent default multi-modal market mix distances were assumed for other inputs where no original data could be provided.

Electricity: Electricity consumption values are for Cementos Moctezuma in calendar year 2023. These values were directly reported from Cementos Moctezuma records. The unit process "market for electricity, medium voltage/electricity, medium voltage/MX/kWh" was used to represent the Mexico grid electricity used by the concrete plant.

Process/space heating: No fuel is used for space heating at this plant.

Fuel required for machinery: Machinery-related fuel requirements were determined from direct Moctezuma information for the reference year 2023.

Waste generation: No High-level radioactive waste is generated on-site at this facility.

Recovered energy: There was no recovered energy on-site.

Recycled/reused material/components: The amount of returned concrete is based on Moctezuma primary data for the reference year, 2023.

Module A1 material losses: Due to lack of data, default loss factors were assumed.

Direct A3 emissions accounting: Direct emissions are modeled using fuel and technology appropriate ecoinvent activities. See LCI input tables for details.

Waste transport requirements: Transportation distances are using estimated values. The waste hauler cannot guarantee the exact distances traveled due to the variation of route and actual location of disposal. Most waste disposal sites are near the plant therefore the 25 km distance is a representative estimate

Product transport requirements: Truck-related fuel requirements were determined from direct Moctezuma information for the reference year 2023.

The following tables depict a list of assumed life cycle inventory utilized in the LCA modeling to generate the impact results across the life cycle modules in scope. An assessment of the quality of each LCI activities utilized from various sources is also provided.

Table 9: **LCI inputs assumed for module A1 (i.e., raw material supply)** ***Data Quality Assessment Key Fair=1, Good=2, Very Good =3.***

Input	LCI.activity	Data.source	Geo	Year	Technology	Time	Geography	Reliability	Completeness
Basalt Sand	basalt quarry operation/basalt/RoW/ kg; Note: modifications made (see ecoinvent activity changes table)	ecoinvent v3.10 in 2024	Edo. Mex	2024	2	3	1	3	3
Water	tap water production, conventional	ecoinvent v3.10 in 2024	Morelos	2024	2	3	1	3	3

	treatment/tap water/RoW/kg								
Limestone Gravel	limestone quarry operation/limestone, unprocessed/RoW/kg; Note: modifications made (see ecoinvent activity changes table)	ecoinvent v3.10 in 2024	Morelos	2024	2	3	1	3	3
Additives	chemical production, organic/chemical, organic/GLO/kg	ecoinvent v3.10 in 2024	Queretaro	2024	2	3	1	3	3
Cement	Gris CPC 40RS/cement/MX/tonne	Program Operator: Labeling Sustainability - EPD ID: bb72e77d-c6d2-4caa-ba9e-18cce10c7824	Morelos	23 November 2024	3	3	3	3	3
River Sand	sand quarry operation, extraction from river bed/sand/BR/kg; Note: modifications made (see ecoinvent activity changes table)	ecoinvent v3.10 in 2024	Morelos	2024	2	3	1	3	3

DATA QUALITY ASSESSMENT

Data quality/variability requirements, as specified in the PCR, are applied. This section describes the data quality achieved relative to the ISO 14044:2006 requirements. Data quality is judged based on its precision (measured, calculated or estimated), completeness (e.g., unreported emissions), consistency (degree of uniformity of the methodology applied within a study serving as a data source) and representativeness (geographical, temporal, and technological).

Precision: Through measurement and calculation, the manufacturers collected and provided primary data on their annual production. For accuracy, the LCA practitioner and 3rd Party Verifier validated the plant gate-to-gate data.

Completeness: All relevant specific processes, including inputs (raw materials, energy and ancillary materials) and outputs (emissions and production volume) were considered and modeled to represent the specified and declared products. Most relevant background materials and processes were taken from ecoinvent v3.10 LCI datasets where relatively recent region-specific electricity inputs were utilized. The most relevant EPDs requiring key A1 input were also utilized where readily available.

Consistency: To ensure consistency, the same modeling structure across the respective product systems was utilized for all inputs, which consisted of raw material inputs and ancillary material, energy flows, water resource inputs, product and co-products outputs, returned and recovered Ready Mix Concrete materials, emissions to air, water and soil, and waste recycling and treatment. The same

background LCI datasets from the ecoinvent v3.10 database were used across all product systems. Crosschecks concerning the plausibility of mass and energy flows were continuously conducted. The LCA team conducted mass and energy balances at the plant and selected process level to maintain a high level of consistency.

Reproducibility: Internal reproducibility is possible since the data and the models are stored and available in a machine readable project file for all foreground and background processes, and in Labeling Sustainability's proprietary Ready Mix Concrete LCA calculator* for all production facility and product-specific calculations. A considerable level of transparency is provided throughout the detailed LCA report as the specifications and material quantity make-up for the declared products are presented and key primary and secondary LCI data sources are summarized. The provision of more detailed publicly accessible data to allow full external reproducibility was not possible due to reasons of confidentiality.

Labeling Sustainability has developed a proprietary tool that allows the calculation of PCR-compliant LCA results for Ready Mix Concrete product designs. The tool auto-calculates results by scaling base-unit technosphere inputs (i.e. 1 kg sand, 1 kWh electricity, etc.) to replicate the reference flow conversions that take place in any typical LCA software like openLCA or SimaPro. The tool was tested against several LCAs performed in openLCA and the tool generated identical results to those realized in openLCA across every impact category and inventory metric (where comparisons could be readily made).

Representativeness: The representativeness of the data is summarized as follows.

- Time related coverage of the manufacturing processes' primary collected data from 2023-01-01 to 2023-12-31.
- Upstream (background) LCI data was either the PCR specified default (if applicable) or more appropriate LCI datasets as found in the country-adjusted ecoinvent v3.10 database.
- Geographical coverage for inputs required by the A3 facility(ies) is representative of its region of focus; other upstream and background processes are based on US, North American, or global average data and adjusted to regional electricity mixes when relevant.
- Technological coverage is typical or average and specific to the participating facilities for all primary data.

ENVIRONMENTAL INDICATORS AND INVENTORY METRICS

Per the PCR, this EPD supports the life cycle impact assessment indicators and inventory metrics as listed in the tables below. As specified in the PCR, the most recent US EPA Tool for the Reduction and Assessment of Chemical and Other Environmental Impacts (TRACI), impact categories were utilized as they provide a North American context for the mandatory category indicators to be included in the EPD. Additionally, the PCR requires a set of inventory metrics to be reported with the LCIA indicators.

Table 10: **Life cycle impact categories and life cycle inventory metrics**

ID	LCIA.indicators	Abbreviations	Units
1	Climate change: global warming potential (GWP100)	GWP100	kg CO2-eq
2	Ozone depletion: ozone depletion potential (ODP)	ODP	kg CFC-11-eq
3	Acidification: acidification potential (AP)	AP	kg SO2-eq

4	Eutrophication: eutrophication potential	EP	kg N-eq
5	Smog formation potential	SFP	kg O3-eq
6	Energy resources: non-renewable: abiotic depletion potential (ADP): fossil fuels	ADPfossil	MJ
Inventory metrics			
7	Inventory indicators ISO21930: Cumulative Energy Demand - renewable energy resources	RPRE	MJ
8	Inventory indicators ISO21930: Renewable primary resources with energy content used as material (i.e., PERM)	PRM	MJ
9	Inventory indicators ISO21930: Cumulative Energy Demand - non-renewable energy resources	NRPRE	MJ
10	Inventory indicators ISO21930: Non-renewable primary resources with energy content used as material (i.e., PENRM)	NRPRM	kg
11	Inventory indicators ISO21930: use of secondary material	SM	MJ
12	Inventory indicators ISO21930: use of renewable secondary fuels	RSF	MJ
13	Inventory indicators ISO21930: recovered energy	RE	MJ
14	Inventory indicators ISO21930: use of net fresh water	FW	m3
15	Inventory indicators ISO21930: hazardous waste disposed	HWD	kg
16	Inventory indicators ISO21930: non-hazardous waste disposed	NHWD	kg
17	Inventory indicators ISO21930: high-level radioactive waste disposed	HLRW	kg
18	Inventory indicators ISO21930: intermediate and low-level radioactive waste disposed	ILLRW	kg
19	Inventory indicators ISO21930: materials for recycling	MR	kg
20	Inventory indicators ISO21930: materials for energy recovery	MER	kg

It should be noted that emerging LCA impact categories and inventory items are still under development and can have high levels of uncertainty that preclude international acceptance pending further development. Use caution when interpreting data in any of the following categories.

- Renewable primary energy resources as energy (fuel);
- Renewable primary resources as material;
- Non-renewable primary resources as energy (fuel);
- Non-renewable primary resources as material;
- Secondary Materials;
- Renewable secondary fuels;
- Non-renewable secondary fuels;
- Recovered energy;
- Abiotic depletion potential for non-fossil mineral resources.
- Land use related impacts, for example on biodiversity and/or soil fertility;
- Toxicological aspects;
- Emissions from land use change [GWP 100 (land-use change)];
- Hazardous waste disposed;
- Non-hazardous waste disposed;

- High-level radioactive waste;
- Intermediate and low-level radioactive waste;
- Components for reuse;
- Materials for recycling;
- Materials for energy recovery;
- Recovered energy exported from the product system.

LIMITATIONS

This EPD is a declaration of potential environmental impact and does not support or provide definitive comparisons of the environmental performance of specific products. Only EPDs prepared from cradle-to-grave life cycle results and based on the same function and reference service life and quantified by the same functional unit can be used to assist purchasers and users in making informed comparisons between products.

LCIA results are relative expressions and do not predict impacts on category endpoints, the exceeding of thresholds, safety margins or risks. Further, LCA offers a wide array of environmental impact indicators, and this EPD reports a collection of those, as specified by the PCR.

In addition to the impact results, this EPD provides several metrics related to resource consumption and waste generation. While these data may be informational in other ways, they do not provide a measure of impact on the environment.

TOTAL IMPACT SUMMARY

The following table reports the total LCA results for each product produced at the given ready mix concrete facility on a per 1m3 of concrete basis.

Table 11: **Total life cycle (across modules in scope) impact results for all mix designs, assuming the geometric mean point values on a per 1 m3 of concrete basis.**

a) Midpoint Impact Categories:

Indicator/LCI Metric	GWP100	ODP	AP	EP	SFP	ADPfossil
Unit	**kg CO2-eq**	**kg CFC-11-eq**	**kg SO2-eq**	**kg N-eq**	**kg O3-eq**	**MJ**
Alta resistencia - f´c 400 - 14 dias	454	3.62E-06	0.458	0.263	8.6	2880
Alta resistencia - f´c 400 - 28 dias	433	3.47E-06	0.444	0.252	8.4	2770
Alta resistencia - f´c 400 - 3 dias	528	4.11E-06	0.504	0.299	9.27	3260
Alta resistencia - f´c 400 - 7 dias	485	3.82E-06	0.477	0.278	8.88	3040
Alta resistencia - f´c 450 - 14 dias	494	3.88E-06	0.482	0.282	8.95	3090
Alta resistencia - f´c 450 - 28 dias	472	3.74E-06	0.469	0.272	8.76	2980

Alta resistencia - f´c 450 - 3 dias	567	4.37E-06	0.529	0.318	9.62	3460
Alta resistencia - f´c 450 - 7 dias	524	4.08E-06	0.501	0.297	9.23	3240
Alta resistencia - f´c 500 - 14 dias	533	4.15E-06	0.507	0.302	9.32	3290
Alta resistencia - f´c 500 - 28 dias	511	4.00E-06	0.494	0.291	9.12	3180
Alta resistencia - f´c 500 - 3 dias	606	4.64E-06	0.554	0.338	9.99	3670
Alta resistencia - f´c 500 - 7 dias	563	4.35E-06	0.527	0.317	9.6	3450
Alta resistencia - f´c 550 - 14 dias	583	4.53E-06	0.544	0.348	9.84	3570
Alta resistencia - f´c 550 - 28 dias	562	4.38E-06	0.53	0.336	9.64	3460
Alta resistencia - f´c 550 - 3 dias	657	5.03E-06	0.591	0.387	10.5	3960
Alta resistencia - f´c 550 - 7 dias	614	4.74E-06	0.563	0.364	10.1	3730
Alta resistencia - f´c 600 - 14 dias	632	4.84E-06	0.573	0.366	10.3	3820
Alta resistencia - f´c 600 - 28 dias	610	4.70E-06	0.56	0.355	10.1	3710
Alta resistencia - f´c 600 - 3 dias	705	5.35E-06	0.621	0.404	11	4210
Alta resistencia - f´c 600 - 7 dias	662	5.05E-06	0.593	0.382	10.6	3980
Baja contracción - MR 38 - 14 dias	353	2.86E-06	0.384	0.233	7.46	2260
Baja contracción - MR 38 - 28 dias	331	2.70E-06	0.369	0.22	7.24	2140
Baja contracción - MR 40 - 14 dias	363	2.93E-06	0.391	0.239	7.55	2320
Baja contracción - MR 40 - 28 dias	341	2.77E-06	0.376	0.226	7.33	2200
Baja contracción - MR 42 - 14 dias	375	3.01E-06	0.399	0.245	7.67	2380
Baja contracción - MR 42 - 28 dias	352	2.85E-06	0.383	0.232	7.44	2260
Baja contracción - MR 45 - 14 dias	393	3.14E-06	0.411	0.256	7.85	2480
Baja contracción - MR 45 - 28 dias	371	2.99E-06	0.396	0.243	7.63	2360
Baja contracción - MR 48 - 14 dias	413	3.29E-06	0.425	0.268	8.05	2590
Baja contracción - MR 48 - 28 dias	391	3.13E-06	0.41	0.255	7.83	2470
Convencional - f´c 100 - 14 dias	241	2.10E-06	0.306	0.141	6.3	1710
Convencional - f´c 100 - 28 dias	220	1.96E-06	0.293	0.132	6.11	1600

Convencional - f´c 100 - 3 dias	314	2.57E-06	0.351	0.172	6.95	2080
Convencional - f´c 100 - 7 dias	272	2.30E-06	0.325	0.154	6.57	1860
Convencional - f´c 150 - 14 dias	263	2.24E-06	0.319	0.15	6.5	1810
Convencional - f´c 150 - 28 dias	242	2.10E-06	0.306	0.141	6.31	1710
Convencional - f´c 150 - 3 dias	336	2.72E-06	0.365	0.181	7.15	2190
Convencional - f´c 150 - 7 dias	293	2.44E-06	0.338	0.163	6.77	1970
Convencional - f´c 200 - 14 dias	297	2.48E-06	0.343	0.165	6.87	2000
Convencional - f´c 200 - 28 dias	275	2.34E-06	0.33	0.156	6.69	1900
Convencional - f´c 200 - 3 dias	369	2.95E-06	0.388	0.196	7.51	2370
Convencional - f´c 200 - 7 dias	327	2.68E-06	0.361	0.178	7.14	2160
Convencional - f´c 250 - 14 dias	324	2.66E-06	0.36	0.177	7.12	2140
Convencional - f´c 250 - 28 dias	302	2.52E-06	0.345	0.168	6.89	2030
Convencional - f´c 250 - 3 dias	397	3.14E-06	0.405	0.208	7.76	2510
Convencional - f´c 250 - 7 dias	354	2.86E-06	0.379	0.19	7.39	2300
Convencional - f´c 300 - 14 dias	376	3.00E-06	0.392	0.199	7.57	2410
Convencional - f´c 300 - 28 dias	355	2.86E-06	0.378	0.19	7.37	2300
Convencional - f´c 300 - 3 dias	449	3.48E-06	0.437	0.23	8.22	2780
Convencional - f´c 300 - 7 dias	406	3.20E-06	0.41	0.212	7.84	2560
Convencional - f´c 350 - 14 dias	421	3.30E-06	0.42	0.218	7.98	2640
Convencional - f´c 350 - 28 dias	400	3.16E-06	0.407	0.209	7.79	2530
Convencional - f´c 350 - 3 dias	494	3.77E-06	0.465	0.25	8.63	3010
Convencional - f´c 350 - 7 dias	451	3.49E-06	0.439	0.231	8.25	2790
Estructural - f´c 250 - 14 dias	324	2.66E-06	0.36	0.177	7.12	2140
Estructural - f´c 250 - 28 dias	303	2.52E-06	0.347	0.168	6.93	2040
Estructural - f´c 250 - 3 dias	397	3.14E-06	0.405	0.208	7.76	2510
Estructural - f´c 250 - 7 dias	354	2.86E-06	0.379	0.19	7.39	2300

Estructural - f´c 300 - 14 dias	376	3.00E-06	0.392	0.199	7.57	2410
Estructural - f´c 300 - 28 dias	355	2.86E-06	0.378	0.19	7.37	2300
Estructural - f´c 300 - 3 dias	449	3.48E-06	0.437	0.23	8.22	2780
Estructural - f´c 300 - 7 dias	406	3.20E-06	0.41	0.212	7.84	2560
Estructural - f´c 350 - 14 dias	421	3.30E-06	0.42	0.218	7.98	2640
Estructural - f´c 350 - 28 dias	400	3.16E-06	0.407	0.209	7.79	2530
Estructural - f´c 350 - 3 dias	494	3.77E-06	0.465	0.25	8.63	3010
Estructural - f´c 350 - 7 dias	451	3.49E-06	0.439	0.231	8.25	2790
Lanzado - f´c 200 - 14 dias	389	3.01E-06	0.43	0.238	8.35	2430
Lanzado - f´c 200 - 28 dias	363	2.83E-06	0.413	0.226	8.1	2290
Lanzado - f´c 200 - 3 dias	433	3.31E-06	0.459	0.259	8.77	2660
Lanzado - f´c 200 - 7 dias	416	3.19E-06	0.447	0.251	8.6	2570
Lanzado - f´c 250 - 14 dias	416	3.19E-06	0.447	0.251	8.6	2570
Lanzado - f´c 250 - 28 dias	389	3.01E-06	0.43	0.238	8.35	2430
Lanzado - f´c 250 - 3 dias	459	3.49E-06	0.476	0.272	9.02	2800
Lanzado - f´c 250 - 7 dias	442	3.37E-06	0.464	0.263	8.85	2710
Lanzado - f´c 300 - 14 dias	451	3.43E-06	0.47	0.267	8.93	2760
Lanzado - f´c 300 - 28 dias	424	3.25E-06	0.453	0.255	8.69	2620
Lanzado - f´c 300 - 3 dias	495	3.73E-06	0.498	0.288	9.35	2990
Lanzado - f´c 300 - 7 dias	477	3.61E-06	0.487	0.28	9.18	2900
Lanzado - f´c 350 - 14 dias	490	3.70E-06	0.495	0.286	9.3	2970
Lanzado - f´c 350 - 28 dias	464	3.52E-06	0.478	0.273	9.06	2820
Lanzado - f´c 350 - 3 dias	534	4.00E-06	0.523	0.306	9.72	3200
Lanzado - f´c 350 - 7 dias	516	3.88E-06	0.512	0.298	9.55	3100
Modulo de ruptura - MR 35 - 14 dias	336	2.72E-06	0.367	0.178	7.18	2190
Modulo de ruptura - MR 35 - 28 dias	325	2.73E-06	0.373	0.179	7.37	2220

Modulo de ruptura - MR 35 - 3 dias	419	3.26E-06	0.419	0.213	7.94	2620
Modulo de ruptura - MR 35 - 7 dias	375	2.98E-06	0.392	0.195	7.54	2390
Modulo de ruptura - MR 36 - 14 dias	340	2.74E-06	0.369	0.18	7.21	2210
Modulo de ruptura - MR 36 - 28 dias	318	2.60E-06	0.356	0.171	7.01	2100
Modulo de ruptura - MR 36 - 3 dias	422	3.28E-06	0.421	0.214	7.97	2630
Modulo de ruptura - MR 36 - 7 dias	379	3.00E-06	0.394	0.196	7.58	2410
Modulo de ruptura - MR 38 - 14 dias	348	2.80E-06	0.375	0.183	7.29	2250
Modulo de ruptura - MR 38 - 28 dias	327	2.65E-06	0.361	0.174	7.09	2140
Modulo de ruptura - MR 38 - 3 dias	431	3.34E-06	0.426	0.218	8.05	2680
Modulo de ruptura - MR 38 - 7 dias	387	3.06E-06	0.399	0.2	7.65	2450
Modulo de ruptura - MR 40 - 14 dias	358	2.86E-06	0.381	0.187	7.37	2300
Modulo de ruptura - MR 40 - 28 dias	336	2.72E-06	0.367	0.178	7.17	2190
Modulo de ruptura - MR 40 - 3 dias	440	3.40E-06	0.432	0.222	8.13	2730
Modulo de ruptura - MR 40 - 7 dias	397	3.12E-06	0.405	0.204	7.74	2500
Modulo de ruptura - MR 42 - 14 dias	370	2.94E-06	0.388	0.192	7.49	2360
Modulo de ruptura - MR 42 - 28 dias	358	2.95E-06	0.394	0.193	7.66	2390
Modulo de ruptura - MR 42 - 3 dias	462	3.64E-06	0.459	0.236	8.63	2920
Modulo de ruptura - MR 42 - 7 dias	419	3.35E-06	0.432	0.218	8.23	2700
Modulo de ruptura - MR 45 - 14 dias	389	3.07E-06	0.4	0.2	7.66	2460
Modulo de ruptura - MR 45 - 28 dias	367	2.92E-06	0.386	0.191	7.46	2350
Modulo de ruptura - MR 45 - 3 dias	471	3.61E-06	0.452	0.235	8.43	2890
Modulo de ruptura - MR 45 - 7 dias	428	3.32E-06	0.425	0.217	8.03	2660
Modulo de ruptura - MR 48 - 14 dias	410	3.20E-06	0.413	0.209	7.85	2570
Modulo de ruptura - MR 48 - 28 dias	388	3.06E-06	0.4	0.2	7.65	2460
Modulo de ruptura - MR 48 - 3 dias	492	3.75E-06	0.465	0.243	8.62	3000
Modulo de ruptura - MR 48 - 7 dias	449	3.46E-06	0.438	0.225	8.22	2770

Relleno Fluido - f´c 15 - 14 dias	192	1.88E-06	0.276	0.113	5.82	1570
Relleno Fluido - f´c 15 - 28 dias	171	1.74E-06	0.263	0.106	5.62	1460
Relleno Fluido - f´c 15 - 3 dias	273	2.39E-06	0.324	0.139	6.51	1970
Relleno Fluido - f´c 15 - 7 dias	230	2.12E-06	0.299	0.125	6.15	1760
Relleno Fluido - f´c 20 - 14 dias	196	1.91E-06	0.279	0.115	5.86	1590
Relleno Fluido - f´c 20 - 28 dias	175	1.77E-06	0.266	0.108	5.67	1480
Relleno Fluido - f´c 20 - 3 dias	277	2.42E-06	0.327	0.14	6.56	1990
Relleno Fluido - f´c 20 - 7 dias	235	2.15E-06	0.302	0.127	6.19	1780
Relleno Fluido - f´c 25 - 14 dias	201	1.94E-06	0.282	0.116	5.9	1610
Relleno Fluido - f´c 25 - 28 dias	180	1.80E-06	0.269	0.109	5.71	1510
Relleno Fluido - f´c 25 - 3 dias	282	2.45E-06	0.33	0.141	6.59	2010
Relleno Fluido - f´c 25 - 7 dias	240	2.18E-06	0.305	0.128	6.23	1800
Relleno Fluido - f´c 30 - 14 dias	207	1.98E-06	0.285	0.118	5.95	1640
Relleno Fluido - f´c 30 - 28 dias	186	1.84E-06	0.272	0.111	5.76	1540
Relleno Fluido - f´c 30 - 3 dias	288	2.49E-06	0.333	0.143	6.64	2040
Relleno Fluido - f´c 30 - 7 dias	246	2.22E-06	0.308	0.13	6.29	1830
Relleno Fluido - f´c 40 - 14 dias	219	2.05E-06	0.293	0.122	6.06	1700
Relleno Fluido - f´c 40 - 28 dias	198	1.92E-06	0.279	0.115	5.86	1590
Relleno Fluido - f´c 40 - 3 dias	300	2.56E-06	0.34	0.147	6.75	2100
Relleno Fluido - f´c 40 - 7 dias	257	2.29E-06	0.315	0.134	6.38	1890
Relleno Fluido - f´c 50 - 14 dias	235	2.15E-06	0.302	0.127	6.19	1780
Relleno Fluido - f´c 50 - 28 dias	213	2.01E-06	0.288	0.12	5.99	1670
Relleno Fluido - f´c 50 - 3 dias	315	2.66E-06	0.349	0.152	6.88	2180
Relleno Fluido - f´c 50 - 7 dias	273	2.39E-06	0.324	0.139	6.51	1970
Relleno Fluido - f´c 60 - 14 dias	251	2.25E-06	0.311	0.132	6.32	1860
Relleno Fluido - f´c 60 - 28 dias	230	2.12E-06	0.299	0.125	6.14	1750

Relleno Fluido - f´c 60 - 3 dias	332	2.76E-06	0.359	0.157	7.02	2260
Relleno Fluido - f´c 60 - 7 dias	290	2.50E-06	0.334	0.144	6.66	2050
Relleno Fluido - f´c 70 - 14 dias	273	2.39E-06	0.324	0.139	6.51	1970
Relleno Fluido - f´c 70 - 28 dias	251	2.25E-06	0.311	0.132	6.31	1860
Relleno Fluido - f´c 70 - 3 dias	353	2.90E-06	0.372	0.164	7.2	2360
Relleno Fluido - f´c 70 - 7 dias	311	2.63E-06	0.347	0.151	6.84	2160

b) Resource Inventory Metrics:

Indicator/LCI Metric	**RPRE**	**PRM**	**NRPRE**	**NRPRM**	**SM**	**RSF**	**RE**	**FW**
Unit	**MJ**	**MJ**	**MJ**	**kg**	**MJ**	**MJ**	**MJ**	**m3**
Alta resistencia - f´c 400 - 14 dias	92.4	2.48	92.7	1340	0.632	0.00633	0.273	0.623
Alta resistencia - f´c 400 - 28 dias	88.1	2.42	88.4	1270	0.619	0.0063	0.268	0.616
Alta resistencia - f´c 400 - 3 dias	107	2.7	107	1590	0.678	0.00643	0.291	0.65
Alta resistencia - f´c 400 - 7 dias	98.4	2.57	98.7	1440	0.652	0.00638	0.28	0.636
Alta resistencia - f´c 450 - 14 dias	100	2.6	101	1470	0.656	0.00637	0.282	0.64
Alta resistencia - f´c 450 - 28 dias	96	2.54	96.3	1400	0.643	0.00635	0.277	0.632
Alta resistencia - f´c 450 - 3 dias	115	2.82	115	1720	0.702	0.00648	0.3	0.668
Alta resistencia - f´c 450 - 7 dias	106	2.69	107	1580	0.675	0.00642	0.289	0.652
Alta resistencia - f´c 500 - 14 dias	108	2.72	108	1610	0.682	0.00645	0.292	0.655
Alta resistencia - f´c 500 - 28 dias	104	2.65	104	1530	0.668	0.00641	0.287	0.648
Alta resistencia - f´c 500 - 3 dias	123	2.93	123	1860	0.729	0.00656	0.31	0.683
Alta resistencia - f´c 500 - 7 dias	114	2.8	114	1710	0.702	0.0065	0.3	0.666
Alta resistencia - f´c 550 - 14 dias	119	2.86	119	1780	0.719	0.00658	0.315	0.687
Alta resistencia - f´c 550 - 28 dias	114	2.8	115	1710	0.705	0.00654	0.31	0.679
Alta resistencia - f´c 550 - 3 dias	133	3.08	134	2040	0.767	0.00671	0.335	0.718
Alta resistencia - f´c 550 - 7 dias	125	2.95	125	1890	0.739	0.00663	0.324	0.7

Alta resistencia - f´c 600 - 14 dias	128	3	128	1950	0.75	0.00666	0.325	0.703
Alta resistencia - f´c 600 - 28 dias	124	2.94	124	1870	0.736	0.00663	0.32	0.694
Alta resistencia - f´c 600 - 3 dias	143	3.22	143	2200	0.799	0.0068	0.345	0.733
Alta resistencia - f´c 600 - 7 dias	134	3.09	134	2050	0.771	0.00673	0.334	0.715
Baja contracción - MR 38 - 14 dias	73.8	2.22	74	1050	0.492	0.00512	0.224	0.563
Baja contracción - MR 38 - 28 dias	69.3	2.15	69.5	972	0.475	0.00504	0.216	0.555
Baja contracción - MR 40 - 14 dias	75.7	2.25	75.9	1080	0.499	0.00515	0.227	0.568
Baja contracción - MR 40 - 28 dias	71.3	2.18	71.5	1000	0.482	0.00507	0.219	0.559
Baja contracción - MR 42 - 14 dias	78	2.28	78.2	1120	0.508	0.00519	0.231	0.572
Baja contracción - MR 42 - 28 dias	73.6	2.22	73.8	1040	0.491	0.00511	0.223	0.563
Baja contracción - MR 45 - 14 dias	81.7	2.33	81.9	1180	0.523	0.00525	0.237	0.579
Baja contracción - MR 45 - 28 dias	77.3	2.27	77.5	1110	0.506	0.00518	0.23	0.57
Baja contracción - MR 48 - 14 dias	85.8	2.39	86	1250	0.538	0.00531	0.244	0.589
Baja contracción - MR 48 - 28 dias	81.4	2.33	81.6	1170	0.521	0.00524	0.236	0.579
Convencional - f´c 100 - 14 dias	49.7	1.87	49.9	632	0.456	0.00542	0.194	0.578
Convencional - f´c 100 - 28 dias	45.4	1.8	45.6	559	0.443	0.0054	0.19	0.573
Convencional - f´c 100 - 3 dias	64.1	2.09	64.3	880	0.5	0.0055	0.209	0.596
Convencional - f´c 100 - 7 dias	55.6	1.96	55.8	734	0.474	0.00546	0.2	0.584
Convencional - f´c 150 - 14 dias	53.9	1.93	54.1	705	0.468	0.00545	0.199	0.581
Convencional - f´c 150 - 28 dias	49.7	1.87	49.9	632	0.456	0.00543	0.194	0.577
Convencional - f´c 150 - 3 dias	68.3	2.15	68.6	953	0.514	0.00553	0.214	0.6
Convencional - f´c 150 - 7 dias	59.8	2.03	60.1	807	0.487	0.00548	0.205	0.59
Convencional - f´c 200 - 14 dias	60.6	2.03	60.8	813	0.501	0.00566	0.211	0.611
Convencional - f´c 200 - 28 dias	56.4	1.97	56.6	740	0.49	0.00566	0.207	0.608
Convencional - f´c 200 - 3 dias	74.9	2.25	75.2	1060	0.545	0.00573	0.226	0.629
Convencional - f´c 200 - 7 dias	66.5	2.12	66.7	915	0.52	0.0057	0.217	0.618

Convencional - f´c 250 - 14 dias	66	2.11	66.2	907	0.518	0.00569	0.217	0.617
Convencional - f´c 250 - 28 dias	61.7	2.05	61.9	834	0.504	0.00564	0.211	0.611
Convencional - f´c 250 - 3 dias	80.4	2.33	80.6	1150	0.562	0.00577	0.232	0.634
Convencional - f´c 250 - 7 dias	71.9	2.2	72.2	1010	0.537	0.00573	0.223	0.625
Convencional - f´c 300 - 14 dias	76.3	2.27	76.5	1080	0.549	0.00573	0.227	0.637
Convencional - f´c 300 - 28 dias	72.1	2.21	72.3	1010	0.536	0.00571	0.223	0.635
Convencional - f´c 300 - 3 dias	90.7	2.49	91	1330	0.594	0.00583	0.243	0.656
Convencional - f´c 300 - 7 dias	82.2	2.36	82.5	1190	0.568	0.00578	0.234	0.647
Convencional - f´c 350 - 14 dias	85.2	2.4	85.4	1240	0.578	0.00581	0.237	0.651
Convencional - f´c 350 - 28 dias	80.9	2.34	81.2	1160	0.565	0.00579	0.233	0.647
Convencional - f´c 350 - 3 dias	99.6	2.62	99.9	1480	0.624	0.00591	0.253	0.671
Convencional - f´c 350 - 7 dias	91.1	2.49	91.4	1340	0.597	0.00586	0.244	0.66
Estructural - f´c 250 - 14 dias	66	2.11	66.2	907	0.518	0.00569	0.217	0.617
Estructural - f´c 250 - 28 dias	61.8	2.05	62	834	0.507	0.00569	0.213	0.615
Estructural - f´c 250 - 3 dias	80.4	2.33	80.6	1150	0.562	0.00577	0.232	0.634
Estructural - f´c 250 - 7 dias	71.9	2.2	72.2	1010	0.537	0.00573	0.223	0.625
Estructural - f´c 300 - 14 dias	76.3	2.27	76.5	1080	0.549	0.00573	0.227	0.637
Estructural - f´c 300 - 28 dias	72.1	2.21	72.3	1010	0.536	0.00571	0.223	0.635
Estructural - f´c 300 - 3 dias	90.7	2.49	91	1330	0.594	0.00583	0.243	0.656
Estructural - f´c 300 - 7 dias	82.2	2.36	82.5	1190	0.568	0.00578	0.234	0.647
Estructural - f´c 350 - 14 dias	85.2	2.4	85.4	1240	0.578	0.00581	0.237	0.651
Estructural - f´c 350 - 28 dias	80.9	2.34	81.2	1160	0.565	0.00579	0.233	0.647
Estructural - f´c 350 - 3 dias	99.6	2.62	99.9	1480	0.624	0.00591	0.253	0.671
Estructural - f´c 350 - 7 dias	91.1	2.49	91.4	1340	0.597	0.00586	0.244	0.66
Lanzado - f´c 200 - 14 dias	86.2	2.32	86.5	1150	0.501	0.00495	0.251	0.568
Lanzado - f´c 200 - 28 dias	81	2.24	81.3	1060	0.481	0.00487	0.243	0.561

Lanzado - f´c 200 - 3 dias	94.9	2.45	95.2	1290	0.534	0.00508	0.263	0.586
Lanzado - f´c 200 - 7 dias	91.4	2.4	91.7	1230	0.521	0.00503	0.258	0.578
Lanzado - f´c 250 - 14 dias	91.4	2.4	91.7	1230	0.521	0.00503	0.258	0.58
Lanzado - f´c 250 - 28 dias	86.2	2.32	86.5	1150	0.501	0.00495	0.251	0.571
Lanzado - f´c 250 - 3 dias	100	2.52	100	1380	0.553	0.00517	0.271	0.597
Lanzado - f´c 250 - 7 dias	96.6	2.47	96.9	1320	0.54	0.00511	0.266	0.59
Lanzado - f´c 300 - 14 dias	98.3	2.5	98.6	1350	0.547	0.00514	0.268	0.595
Lanzado - f´c 300 - 28 dias	93.1	2.42	93.4	1260	0.527	0.00506	0.261	0.585
Lanzado - f´c 300 - 3 dias	107	2.63	107	1500	0.58	0.00528	0.28	0.611
Lanzado - f´c 300 - 7 dias	103	2.57	104	1440	0.566	0.00522	0.275	0.604
Lanzado - f´c 350 - 14 dias	106	2.61	106	1480	0.576	0.00526	0.279	0.61
Lanzado - f´c 350 - 28 dias	101	2.54	101	1400	0.556	0.00518	0.271	0.601
Lanzado - f´c 350 - 3 dias	115	2.74	115	1630	0.609	0.00539	0.291	0.627
Lanzado - f´c 350 - 7 dias	111	2.69	111	1570	0.595	0.00534	0.286	0.621
Modulo de ruptura - MR 35 - 14 dias	68.3	2.15	68.6	952	0.516	0.00557	0.215	0.576
Modulo de ruptura - MR 35 - 28 dias	66	2.09	66.3	879	0.564	0.00633	0.241	0.587
Modulo de ruptura - MR 35 - 3 dias	84.5	2.4	84.8	1230	0.571	0.00574	0.234	0.603
Modulo de ruptura - MR 35 - 7 dias	76	2.27	76.3	1080	0.543	0.00566	0.224	0.589
Modulo de ruptura - MR 36 - 14 dias	69	2.16	69.2	963	0.519	0.00558	0.216	0.577
Modulo de ruptura - MR 36 - 28 dias	64.7	2.1	65	890	0.504	0.00554	0.211	0.568
Modulo de ruptura - MR 36 - 3 dias	85.2	2.41	85.5	1240	0.574	0.00575	0.235	0.605
Modulo de ruptura - MR 36 - 7 dias	76.7	2.28	76.9	1090	0.546	0.00567	0.225	0.589
Modulo de ruptura - MR 38 - 14 dias	70.7	2.19	70.9	992	0.524	0.0056	0.218	0.578
Modulo de ruptura - MR 38 - 28 dias	66.4	2.13	66.7	920	0.51	0.00555	0.213	0.572
Modulo de ruptura - MR 38 - 3 dias	86.9	2.43	87.2	1270	0.579	0.00576	0.236	0.608
Modulo de ruptura - MR 38 - 7 dias	78.4	2.31	78.6	1120	0.551	0.00568	0.227	0.594

Modulo de ruptura - MR 40 - 14 dias	72.6	2.22	72.8	1020	0.53	0.00561	0.22	0.582
Modulo de ruptura - MR 40 - 28 dias	68.3	2.15	68.5	952	0.516	0.00557	0.215	0.574
Modulo de ruptura - MR 40 - 3 dias	88.8	2.46	89	1300	0.585	0.00578	0.239	0.611
Modulo de ruptura - MR 40 - 7 dias	80.3	2.33	80.5	1160	0.557	0.0057	0.229	0.595
Modulo de ruptura - MR 42 - 14 dias	75	2.25	75.2	1070	0.538	0.00564	0.222	0.585
Modulo de ruptura - MR 42 - 28 dias	72.6	2.19	72.9	992	0.585	0.00637	0.248	0.596
Modulo de ruptura - MR 42 - 3 dias	93	2.5	93.4	1340	0.654	0.00657	0.271	0.632
Modulo de ruptura - MR 42 - 7 dias	84.5	2.37	84.8	1200	0.625	0.00649	0.261	0.618
Modulo de ruptura - MR 45 - 14 dias	78.7	2.31	79	1130	0.551	0.00567	0.227	0.59
Modulo de ruptura - MR 45 - 28 dias	74.4	2.25	74.7	1060	0.536	0.00562	0.222	0.584
Modulo de ruptura - MR 45 - 3 dias	94.9	2.55	95.2	1410	0.607	0.00585	0.246	0.618
Modulo de ruptura - MR 45 - 7 dias	86.4	2.43	86.7	1260	0.578	0.00576	0.236	0.605
Modulo de ruptura - MR 48 - 14 dias	82.8	2.37	83.1	1200	0.565	0.00571	0.232	0.598
Modulo de ruptura - MR 48 - 28 dias	78.5	2.31	78.8	1130	0.55	0.00567	0.227	0.59
Modulo de ruptura - MR 48 - 3 dias	99	2.62	99.3	1480	0.62	0.00589	0.251	0.626
Modulo de ruptura - MR 48 - 7 dias	90.5	2.49	90.8	1330	0.592	0.0058	0.241	0.612
Relleno Fluido - f´c 15 - 14 dias	39.4	1.68	39.6	410	0.506	0.00637	0.22	0.587
Relleno Fluido - f´c 15 - 28 dias	35.2	1.61	35.4	338	0.492	0.00633	0.217	0.58
Relleno Fluido - f´c 15 - 3 dias	55.1	1.92	55.4	684	0.552	0.00642	0.232	0.61
Relleno Fluido - f´c 15 - 7 dias	46.9	1.79	47.2	540	0.529	0.0064	0.226	0.598
Relleno Fluido - f´c 20 - 14 dias	40.2	1.69	40.5	425	0.508	0.00637	0.221	0.589
Relleno Fluido - f´c 20 - 28 dias	36	1.62	36.3	353	0.496	0.00635	0.218	0.583
Relleno Fluido - f´c 20 - 3 dias	56	1.94	56.3	698	0.556	0.00643	0.233	0.613
Relleno Fluido - f´c 20 - 7 dias	47.7	1.81	48	554	0.531	0.0064	0.227	0.6
Relleno Fluido - f´c 25 - 14 dias	41.2	1.7	41.5	442	0.511	0.00637	0.222	0.591
Relleno Fluido - f´c 25 - 28 dias	37	1.64	37.3	370	0.499	0.00635	0.219	0.585

Relleno Fluido - f´c 25 - 3 dias	57	1.95	57.2	715	0.557	0.00642	0.233	0.614
Relleno Fluido - f´c 25 - 7 dias	48.7	1.82	49	571	0.534	0.00641	0.227	0.602
Relleno Fluido - f´c 30 - 14 dias	42.4	1.72	42.6	462	0.515	0.00638	0.223	0.595
Relleno Fluido - f´c 30 - 28 dias	38.2	1.66	38.5	390	0.502	0.00636	0.219	0.588
Relleno Fluido - f´c 30 - 3 dias	58.1	1.97	58.4	736	0.561	0.00643	0.234	0.617
Relleno Fluido - f´c 30 - 7 dias	49.9	1.84	50.2	592	0.538	0.00641	0.228	0.605
Relleno Fluido - f´c 40 - 14 dias	44.7	1.76	45	502	0.522	0.00639	0.224	0.598
Relleno Fluido - f´c 40 - 28 dias	40.5	1.69	40.8	430	0.508	0.00635	0.221	0.593
Relleno Fluido - f´c 40 - 3 dias	60.5	2.01	60.7	776	0.568	0.00644	0.236	0.622
Relleno Fluido - f´c 40 - 7 dias	52.2	1.88	52.4	632	0.544	0.00641	0.229	0.61
Relleno Fluido - f´c 50 - 14 dias	47.7	1.81	48	554	0.531	0.0064	0.227	0.603
Relleno Fluido - f´c 50 - 28 dias	43.5	1.74	43.8	482	0.517	0.00636	0.223	0.597
Relleno Fluido - f´c 50 - 3 dias	63.4	2.05	63.7	828	0.577	0.00645	0.238	0.627
Relleno Fluido - f´c 50 - 7 dias	55.1	1.92	55.4	684	0.552	0.00642	0.232	0.613
Relleno Fluido - f´c 60 - 14 dias	51	1.86	51.3	612	0.54	0.0064	0.228	0.608
Relleno Fluido - f´c 60 - 28 dias	46.8	1.79	47.1	540	0.527	0.00638	0.225	0.602
Relleno Fluido - f´c 60 - 3 dias	66.7	2.11	67	885	0.586	0.00645	0.24	0.631
Relleno Fluido - f´c 60 - 7 dias	58.5	1.98	58.8	741	0.562	0.00643	0.234	0.619
Relleno Fluido - f´c 70 - 14 dias	55.1	1.92	55.4	684	0.552	0.00641	0.232	0.614
Relleno Fluido - f´c 70 - 28 dias	50.9	1.86	51.2	612	0.538	0.00638	0.228	0.607
Relleno Fluido - f´c 70 - 3 dias	70.9	2.17	71.2	957	0.598	0.00646	0.243	0.636
Relleno Fluido - f´c 70 - 7 dias	62.6	2.04	62.9	813	0.574	0.00645	0.237	0.624

c) Waste/output Inventory Metrics:

Indicator/LCI Metric	HWD	NHWD	HLRW	ILLRW	MR	MER
Unit	kg	kg	kg	kg	kg	kg
Alta resistencia - f´c 400 - 14 dias	3.43	84.7	0.000184	0.000655	0.0402	7.81E-05
Alta resistencia - f´c 400 - 28 dias	3.32	81.9	0.000177	0.000627	0.0384	7.68E-05
Alta resistencia - f´c 400 - 3 dias	3.78	94.5	0.000208	0.000752	0.0463	8.30E-05
Alta resistencia - f´c 400 - 7 dias	3.57	88.8	0.000194	0.000695	0.0427	8.02E-05
Alta resistencia - f´c 450 - 14 dias	3.61	90	0.000197	0.000707	0.0435	8.07E-05
Alta resistencia - f´c 450 - 28 dias	3.51	87.2	0.00019	0.000679	0.0417	7.93E-05
Alta resistencia - f´c 450 - 3 dias	3.97	99.9	0.000221	0.000804	0.0496	8.56E-05
Alta resistencia - f´c 450 - 7 dias	3.76	94.1	0.000207	0.000747	0.046	8.27E-05
Alta resistencia - f´c 500 - 14 dias	3.81	95.3	0.00021	0.000759	0.0467	8.34E-05
Alta resistencia - f´c 500 - 28 dias	3.7	92.4	0.000203	0.00073	0.0449	8.20E-05
Alta resistencia - f´c 500 - 3 dias	4.17	105	0.000234	0.000855	0.0528	8.83E-05
Alta resistencia - f´c 500 - 7 dias	3.96	99.4	0.00022	0.000799	0.0492	8.55E-05
Alta resistencia - f´c 550 - 14 dias	4.13	104	0.00023	0.000833	0.0511	8.88E-05
Alta resistencia - f´c 550 - 28 dias	4.02	101	0.000223	0.000804	0.0493	8.73E-05
Alta resistencia - f´c 550 - 3 dias	4.5	114	0.000255	0.000931	0.0572	9.41E-05
Alta resistencia - f´c 550 - 7 dias	4.29	108	0.00024	0.000873	0.0536	9.10E-05
Alta resistencia - f´c 600 - 14 dias	4.35	110	0.000245	0.000895	0.0551	9.18E-05
Alta resistencia - f´c 600 - 28 dias	4.25	107	0.000238	0.000866	0.0533	9.03E-05
Alta resistencia - f´c 600 - 3 dias	4.72	120	0.00027	0.000993	0.0612	9.71E-05
Alta resistencia - f´c 600 - 7 dias	4.51	114	0.000256	0.000935	0.0576	9.40E-05
Baja contracción - MR 38 - 14 dias	2.8	69.4	0.000152	0.000529	0.0319	6.17E-05
Baja contracción - MR 38 - 28 dias	2.68	66.2	0.000144	0.000499	0.03	5.96E-05
Baja contracción - MR 40 - 14 dias	2.85	70.9	0.000155	0.000542	0.0327	6.26E-05

Baja contracción - MR 40 - 28 dias	2.73	67.6	0.000147	0.000512	0.0308	6.05E-05
Baja contracción - MR 42 - 14 dias	2.92	72.6	0.000159	0.000558	0.0337	6.37E-05
Baja contracción - MR 42 - 28 dias	2.79	69.3	0.000151	0.000528	0.0318	6.16E-05
Baja contracción - MR 45 - 14 dias	3.02	75.3	0.000165	0.000583	0.0352	6.53E-05
Baja contracción - MR 45 - 28 dias	2.9	72	0.000158	0.000553	0.0334	6.33E-05
Baja contracción - MR 48 - 14 dias	3.13	78.3	0.000172	0.00061	0.0369	6.72E-05
Baja contracción - MR 48 - 28 dias	3.01	75	0.000165	0.00058	0.0351	6.51E-05
Convencional - f´c 100 - 14 dias	2.2	53.1	0.000108	0.000364	0.0222	5.67E-05
Convencional - f´c 100 - 28 dias	2.11	50.4	0.000101	0.000336	0.0204	5.54E-05
Convencional - f´c 100 - 3 dias	2.54	62.4	0.000131	0.000459	0.0282	6.10E-05
Convencional - f´c 100 - 7 dias	2.34	56.9	0.000117	0.000403	0.0247	5.85E-05
Convencional - f´c 150 - 14 dias	2.3	55.8	0.000115	0.000392	0.024	5.80E-05
Convencional - f´c 150 - 28 dias	2.2	53.1	0.000108	0.000364	0.0222	5.67E-05
Convencional - f´c 150 - 3 dias	2.64	65.1	0.000138	0.000487	0.03	6.24E-05
Convencional - f´c 150 - 7 dias	2.44	59.7	0.000124	0.000431	0.0265	5.98E-05
Convencional - f´c 200 - 14 dias	2.49	60.7	0.000126	0.000437	0.0268	6.15E-05
Convencional - f´c 200 - 28 dias	2.4	58.1	0.00012	0.00041	0.025	6.04E-05
Convencional - f´c 200 - 3 dias	2.83	70	0.00015	0.000531	0.0328	6.58E-05
Convencional - f´c 200 - 7 dias	2.63	64.6	0.000136	0.000476	0.0293	6.34E-05
Convencional - f´c 250 - 14 dias	2.62	64.2	0.000135	0.000473	0.029	6.32E-05
Convencional - f´c 250 - 28 dias	2.52	61.4	0.000128	0.000444	0.0272	6.17E-05
Convencional - f´c 250 - 3 dias	2.96	73.5	0.000159	0.000567	0.0351	6.75E-05
Convencional - f´c 250 - 7 dias	2.76	68.1	0.000145	0.000512	0.0315	6.50E-05
Convencional - f´c 300 - 14 dias	2.86	70.9	0.000152	0.00054	0.0334	6.62E-05
Convencional - f´c 300 - 28 dias	2.76	68.2	0.000145	0.000512	0.0316	6.49E-05
Convencional - f´c 300 - 3 dias	3.2	80.2	0.000175	0.000635	0.0394	7.07E-05

Convencional - f´c 300 - 7 dias	3	74.8	0.000162	0.000579	0.0359	6.81E-05
Convencional - f´c 350 - 14 dias	3.07	76.7	0.000167	0.000599	0.0371	6.91E-05
Convencional - f´c 350 - 28 dias	2.97	74	0.00016	0.000571	0.0353	6.78E-05
Convencional - f´c 350 - 3 dias	3.41	86.1	0.00019	0.000693	0.0431	7.37E-05
Convencional - f´c 350 - 7 dias	3.21	80.6	0.000176	0.000638	0.0396	7.11E-05
Estructural - f´c 250 - 14 dias	2.62	64.2	0.000135	0.000473	0.029	6.32E-05
Estructural - f´c 250 - 28 dias	2.53	61.6	0.000129	0.000445	0.0273	6.21E-05
Estructural - f´c 250 - 3 dias	2.96	73.5	0.000159	0.000567	0.0351	6.75E-05
Estructural - f´c 250 - 7 dias	2.76	68.1	0.000145	0.000512	0.0315	6.50E-05
Estructural - f´c 300 - 14 dias	2.86	70.9	0.000152	0.00054	0.0334	6.62E-05
Estructural - f´c 300 - 28 dias	2.76	68.2	0.000145	0.000512	0.0316	6.49E-05
Estructural - f´c 300 - 3 dias	3.2	80.2	0.000175	0.000635	0.0394	7.07E-05
Estructural - f´c 300 - 7 dias	3	74.8	0.000162	0.000579	0.0359	6.81E-05
Estructural - f´c 350 - 14 dias	3.07	76.7	0.000167	0.000599	0.0371	6.91E-05
Estructural - f´c 350 - 28 dias	2.97	74	0.00016	0.000571	0.0353	6.78E-05
Estructural - f´c 350 - 3 dias	3.41	86.1	0.00019	0.000693	0.0431	7.37E-05
Estructural - f´c 350 - 7 dias	3.21	80.6	0.000176	0.000638	0.0396	7.11E-05
Lanzado - f´c 200 - 14 dias	3.28	80.8	0.000197	0.000645	0.0368	6.40E-05
Lanzado - f´c 200 - 28 dias	3.15	77.2	0.000188	0.00061	0.0346	6.18E-05
Lanzado - f´c 200 - 3 dias	3.51	86.8	0.000212	0.000703	0.0405	6.76E-05
Lanzado - f´c 200 - 7 dias	3.42	84.4	0.000206	0.00068	0.039	6.61E-05
Lanzado - f´c 250 - 14 dias	3.42	84.4	0.000206	0.00068	0.039	6.61E-05
Lanzado - f´c 250 - 28 dias	3.28	80.8	0.000197	0.000645	0.0368	6.40E-05
Lanzado - f´c 250 - 3 dias	3.64	90.4	0.00022	0.000737	0.0427	6.97E-05
Lanzado - f´c 250 - 7 dias	3.55	88	0.000214	0.000714	0.0412	6.83E-05
Lanzado - f´c 300 - 14 dias	3.59	89.1	0.000217	0.000725	0.0419	6.89E-05

Lanzado - f´c 300 - 28 dias	3.46	85.6	0.000209	0.000691	0.0397	6.68E-05
Lanzado - f´c 300 - 3 dias	3.81	95.1	0.000232	0.000782	0.0456	7.25E-05
Lanzado - f´c 300 - 7 dias	3.72	92.7	0.000226	0.000759	0.0441	7.11E-05
Lanzado - f´c 350 - 14 dias	3.79	94.4	0.00023	0.000776	0.0452	7.21E-05
Lanzado - f´c 350 - 28 dias	3.65	90.9	0.000221	0.000742	0.043	7.00E-05
Lanzado - f´c 350 - 3 dias	4.01	100	0.000244	0.000833	0.0488	7.56E-05
Lanzado - f´c 350 - 7 dias	3.92	97.9	0.000238	0.00081	0.0473	7.42E-05
Modulo de ruptura - MR 35 - 14 dias	2.65	65.1	0.000138	0.000487	0.0301	6.30E-05
Modulo de ruptura - MR 35 - 28 dias	2.79	67	0.00014	0.00048	0.0294	7.07E-05
Modulo de ruptura - MR 35 - 3 dias	3.04	75.8	0.000165	0.000594	0.0369	6.85E-05
Modulo de ruptura - MR 35 - 7 dias	2.83	70.2	0.000151	0.000537	0.0333	6.56E-05
Modulo de ruptura - MR 36 - 14 dias	2.66	65.6	0.000139	0.000491	0.0304	6.32E-05
Modulo de ruptura - MR 36 - 28 dias	2.56	62.8	0.000132	0.000463	0.0286	6.18E-05
Modulo de ruptura - MR 36 - 3 dias	3.05	76.2	0.000166	0.000598	0.0372	6.87E-05
Modulo de ruptura - MR 36 - 7 dias	2.85	70.6	0.000152	0.000542	0.0336	6.59E-05
Modulo de ruptura - MR 38 - 14 dias	2.7	66.7	0.000142	0.000502	0.0311	6.38E-05
Modulo de ruptura - MR 38 - 28 dias	2.6	63.9	0.000135	0.000474	0.0293	6.23E-05
Modulo de ruptura - MR 38 - 3 dias	3.09	77.3	0.000169	0.000609	0.0379	6.92E-05
Modulo de ruptura - MR 38 - 7 dias	2.89	71.8	0.000155	0.000553	0.0343	6.64E-05
Modulo de ruptura - MR 40 - 14 dias	2.75	67.9	0.000145	0.000515	0.0319	6.43E-05
Modulo de ruptura - MR 40 - 28 dias	2.65	65.1	0.000138	0.000487	0.0301	6.29E-05
Modulo de ruptura - MR 40 - 3 dias	3.14	78.5	0.000172	0.000621	0.0387	6.98E-05
Modulo de ruptura - MR 40 - 7 dias	2.93	72.9	0.000158	0.000565	0.0351	6.70E-05
Modulo de ruptura - MR 42 - 14 dias	2.81	69.5	0.000149	0.00053	0.0329	6.52E-05
Modulo de ruptura - MR 42 - 28 dias	2.94	71.2	0.000151	0.000523	0.0321	7.26E-05
Modulo de ruptura - MR 42 - 3 dias	3.43	84.6	0.000184	0.000658	0.0407	7.95E-05

Modulo de ruptura - MR 42 - 7 dias	3.22	79	0.00017	0.000601	0.0371	7.66E-05
Modulo de ruptura - MR 45 - 14 dias	2.9	71.9	0.000155	0.000555	0.0344	6.64E-05
Modulo de ruptura - MR 45 - 28 dias	2.79	69.1	0.000148	0.000527	0.0326	6.49E-05
Modulo de ruptura - MR 45 - 3 dias	3.29	82.5	0.000182	0.000662	0.0413	7.20E-05
Modulo de ruptura - MR 45 - 7 dias	3.08	76.9	0.000168	0.000606	0.0377	6.91E-05
Modulo de ruptura - MR 48 - 14 dias	2.99	74.6	0.000162	0.000582	0.0362	6.78E-05
Modulo de ruptura - MR 48 - 28 dias	2.89	71.8	0.000155	0.000554	0.0344	6.63E-05
Modulo de ruptura - MR 48 - 3 dias	3.39	85.2	0.000189	0.000689	0.043	7.34E-05
Modulo de ruptura - MR 48 - 7 dias	3.18	79.6	0.000175	0.000633	0.0394	7.05E-05
Relleno Fluido - f´c 15 - 14 dias	2.2	50.6	9.80E-05	0.000307	0.0183	6.53E-05
Relleno Fluido - f´c 15 - 28 dias	2.11	48	9.13E-05	0.00028	0.0165	6.41E-05
Relleno Fluido - f´c 15 - 3 dias	2.54	59.9	0.000122	0.000409	0.0249	6.89E-05
Relleno Fluido - f´c 15 - 7 dias	2.36	55.1	0.00011	0.000356	0.0214	6.71E-05
Relleno Fluido - f´c 20 - 14 dias	2.22	51.1	9.93E-05	0.000312	0.0186	6.55E-05
Relleno Fluido - f´c 20 - 28 dias	2.13	48.5	9.27E-05	0.000285	0.0169	6.44E-05
Relleno Fluido - f´c 20 - 3 dias	2.56	60.5	0.000124	0.000414	0.0253	6.93E-05
Relleno Fluido - f´c 20 - 7 dias	2.38	55.5	0.000111	0.000361	0.0218	6.73E-05
Relleno Fluido - f´c 25 - 14 dias	2.24	51.6	0.000101	0.000319	0.019	6.57E-05
Relleno Fluido - f´c 25 - 28 dias	2.15	49.2	9.43E-05	0.000292	0.0173	6.47E-05
Relleno Fluido - f´c 25 - 3 dias	2.57	61	0.000125	0.00042	0.0256	6.93E-05
Relleno Fluido - f´c 25 - 7 dias	2.4	56.2	0.000113	0.000367	0.0222	6.75E-05
Relleno Fluido - f´c 30 - 14 dias	2.27	52.4	0.000103	0.000326	0.0195	6.60E-05
Relleno Fluido - f´c 30 - 28 dias	2.18	49.9	9.61E-05	3.00E-04	0.0178	6.50E-05
Relleno Fluido - f´c 30 - 3 dias	2.6	61.7	0.000127	0.000428	0.0261	6.96E-05
Relleno Fluido - f´c 30 - 7 dias	2.43	56.9	0.000114	0.000375	0.0227	6.78E-05
Relleno Fluido - f´c 40 - 14 dias	2.32	53.8	0.000106	0.000342	0.0205	6.66E-05

Relleno Fluido - f´c 40 - 28 dias	2.22	51.2	9.96E-05	0.000314	0.0187	6.54E-05
Relleno Fluido - f´c 40 - 3 dias	2.65	63.2	0.000131	0.000443	0.0271	7.02E-05
Relleno Fluido - f´c 40 - 7 dias	2.47	58.2	0.000118	0.00039	0.0236	6.83E-05
Relleno Fluido - f´c 50 - 14 dias	2.38	55.6	0.000111	0.000361	0.0218	6.73E-05
Relleno Fluido - f´c 50 - 28 dias	2.29	53	0.000104	0.000334	0.02	6.61E-05
Relleno Fluido - f´c 50 - 3 dias	2.71	64.9	0.000135	0.000462	0.0284	7.09E-05
Relleno Fluido - f´c 50 - 7 dias	2.54	60	0.000122	0.000409	0.0249	6.89E-05
Relleno Fluido - f´c 60 - 14 dias	2.45	57.5	0.000116	0.000382	0.0231	6.79E-05
Relleno Fluido - f´c 60 - 28 dias	2.36	55	0.00011	0.000355	0.0214	6.69E-05
Relleno Fluido - f´c 60 - 3 dias	2.78	66.8	0.00014	0.000483	0.0297	7.16E-05
Relleno Fluido - f´c 60 - 7 dias	2.61	62	0.000128	0.00043	0.0263	6.98E-05
Relleno Fluido - f´c 70 - 14 dias	2.54	60	0.000122	0.000409	0.0249	6.89E-05
Relleno Fluido - f´c 70 - 28 dias	2.44	57.4	0.000116	0.000382	0.0231	6.77E-05
Relleno Fluido - f´c 70 - 3 dias	2.87	69.3	0.000147	0.00051	0.0315	7.25E-05
Relleno Fluido - f´c 70 - 7 dias	2.7	64.4	0.000134	0.000457	0.028	7.07E-05

OTHER ENVIRONMENTAL INFO

- Certificado SIG Calidad
- Certificado SIG Medio Ambiente
- Certificado SIG Seguridad y Salud en el Trabajo
- ONNNCE
- EMA
- Industria Limpia
- Empresa Segura

REFERENCES

ASTM Standards:

- ASTM A36/A36M Standard Specification for Carbon Structural Steel
- ASTM A108 Standard Specification for Steel Bar, Carbon and Alloy, Cold-Finished
- ASTM A123/A123M Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products

- ASTM A153/A153M Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware
- ASTM A184 Standard Specification for Welded Deformed Steel Bar Mats for Concrete Reinforcement
- ASTM A307 Standard Specification for Carbon Steel Bolts, Studs, and Threaded Rod 60,000 PSI Tensile Strength
- ASTM A416/A416M Standard Specification for Steel Strand, Uncoated Seven-Wire for Prestressed Concrete
- ASTM A555/A555M Standard Specification for General Requirements for Stainless Steel Wire and Wire Rods
- ASTM A615/A615M Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement
- ASTM A666 Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar
- ASTM A706/A706M Standard Specification for Deformed and Plain Low-Alloy Steel Bars for Concrete Reinforcement
- ASTM A767/A767M Standard Specification for Zinc-Coated (Galvanized) Steel Bars for Concrete Reinforcement
- ASTM A775/A775M Standard Specification for Epoxy-Coated Steel Reinforcing Bars
- ASTM A820/A820M Standard Specification for Steel Fibers for Fiber-Reinforced Concrete
- ASTM A884/A884M Standard Specification for Epoxy-Coated Steel Wire and Welded Wire Reinforcement
- ASTM A934/A934M Standard Specification for Epoxy-Coated Prefabricated Steel Reinforcing Bars
- ASTM A1064/A1064M Standard Specification for Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete
- ASTM C33/C33M Standard Specification for Concrete Aggregates
- ASTM C94 Standard Specification for Ready-Mixed Concrete
- ASTM C150/C150M Standard Specification for Portland Cement
- ASTM C260/C260M Standard Specification for Air-Entraining Admixtures for Concrete
- ASTM C595 Standard Specification for Blended Hydraulic Cements
- ASTM C618 Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete
- ASTM C979/C979M Standard Specification for Pigments for Integrally Colored Concrete
- ASTM C989/C989M Standard Specification for Slag Cement for Use in Concrete and Mortars
- ASTM C1017/C1017M Standard Specification for Chemical Admixtures for Use in Producing Flowing Concrete
- ASTM C1116/C1116M Standard Specification for Fiber-Reinforced Concrete
- ASTM C1157/C1157M Standard Performance Specification for Hydraulic Cement
- ASTM C1240 Standard Specification for Silica Fume Used in Cementitious Mixtures
- ASTM C1602/C1602M Standard Specification for Mixing Water Used in the Production of Hydraulic Cement Concrete
- ASTM G109 Standard Test Method for Determining Effects of Chemical Admixtures on Corrosion of Embedded Steel Reinforcement in Concrete Exposed to Chloride Environments

- ASTM C330/C330M Standard Specification for Lightweight Aggregates for Structural Concrete
- ASTM C494/C494M Standard Specification for Chemical Admixtures for Concrete

ISO Standards:

- ISO 6707-1: 2014 Buildings and Civil Engineering Works - Vocabulary - Part 1: General Terms
- ISO 14021:1999 Environmental Labels and Declarations - Self-declared Environmental Claims (Type II Environmental Labeling)
- ISO 14025:2006 Environmental Labels and Declarations - Type III Environmental Declarations - Principles and Procedures
- ISO 14040:2006 Environmental Management - Life Cycle Assessment - Principles and Framework
- ISO 14044:2006 Environmental Management - Life Cycle Assessment - Requirements and Guidelines
- ISO 14067:2018 Greenhouse Gases - Carbon Footprint of Products - Requirements and Guidelines for Quantification
- ISO 14050:2009 Environmental Management - Vocabulary
- ISO 21930:2017 Sustainability in Building Construction - Environmental Declaration of Building Products