LATIN AMERICA EPD®

EPD®
THE INTERNATIONAL EPD® SYSTEM

Environmental Product Declaration

Steel reinforcing bar manufactured from 93% steel scrap by
GRUPO ACERERO: Steel Rebar NMX–B-506,ASTM-A615M, ASTM-A706M
In conformity with ISO 14025:2006 and EN15804:2012+A2:2019

GRUPO ACERERO

Programme:

The International EPD® System
www.environdec.com

EPD registered through the fully aligned regional programme / hub:

Latin American Hub, www.epd-latinamerica.com

Programme operator: Regional Hub:

EPD International AB

Latin American Hub of the International EPD® System

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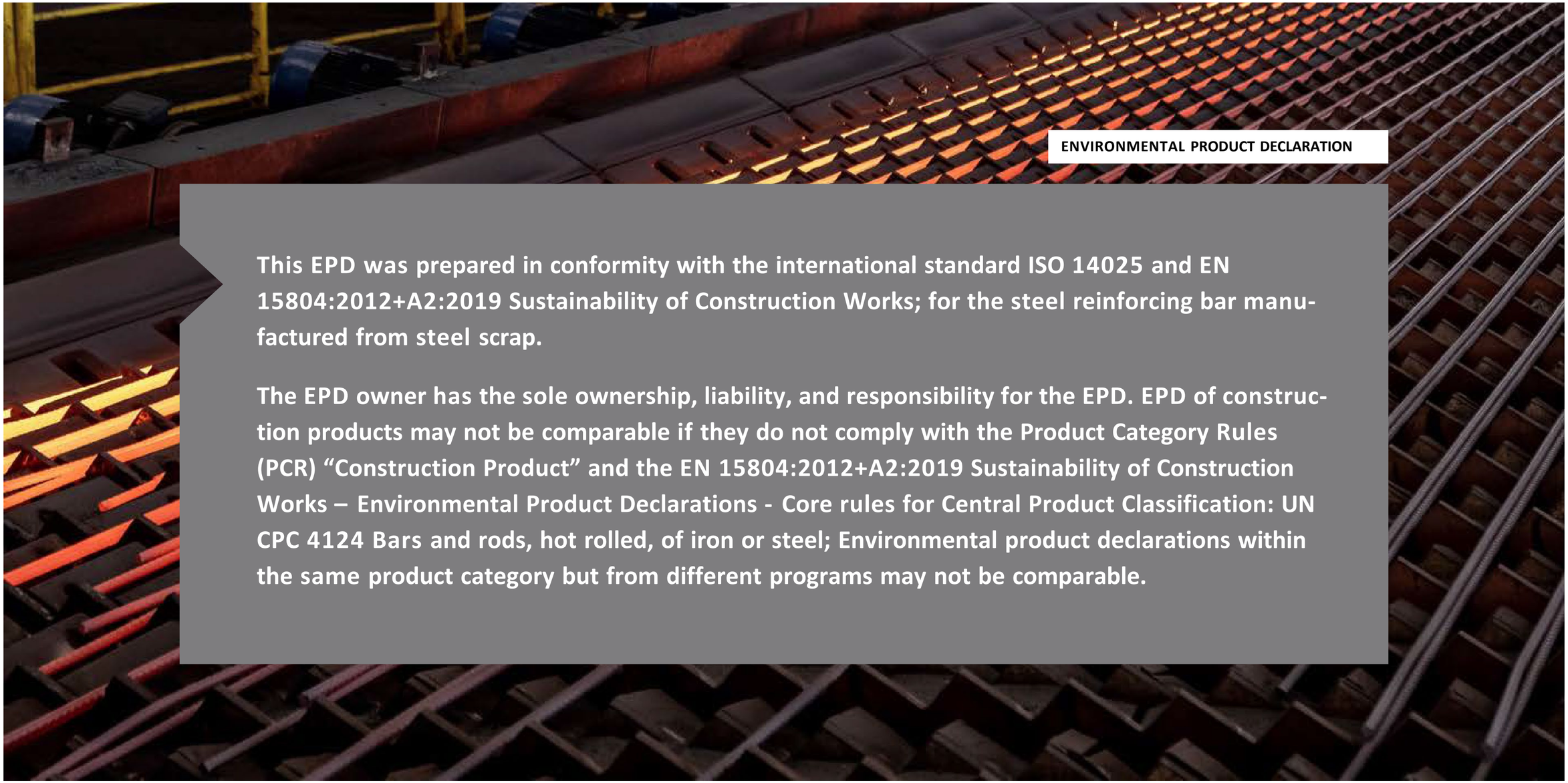
Mexico, United States, and Latin America

ECO PLATFORM
EPD VERIFIED

An EPD should provide current information and may be updated if conditions change. The stated validity is therefore subject to the continued registration and publication at www.environdec.com.

ENVIRONMENTAL PRODUCT DECLARATION

Content



ENVIRONMENTAL PRODUCT DECLARATION

This EPD was prepared in conformity with the international standard ISO 14025 and EN 15804:2012+A2:2019 Sustainability of Construction Works; for the steel reinforcing bar manufactured from steel scrap.

The EPD owner has the sole ownership, liability, and responsibility for the EPD. EPD of construction products may not be comparable if they do not comply with the Product Category Rules (PCR) “Construction Product” and the EN 15804:2012+A2:2019 Sustainability of Construction Works – Environmental Product Declarations - Core rules for Central Product Classification: UN CPC 4124 Bars and rods, hot rolled, of iron or steel; Environmental product declarations within the same product category but from different programs may not be comparable.

1. GRUPO ACERERO (GASA)

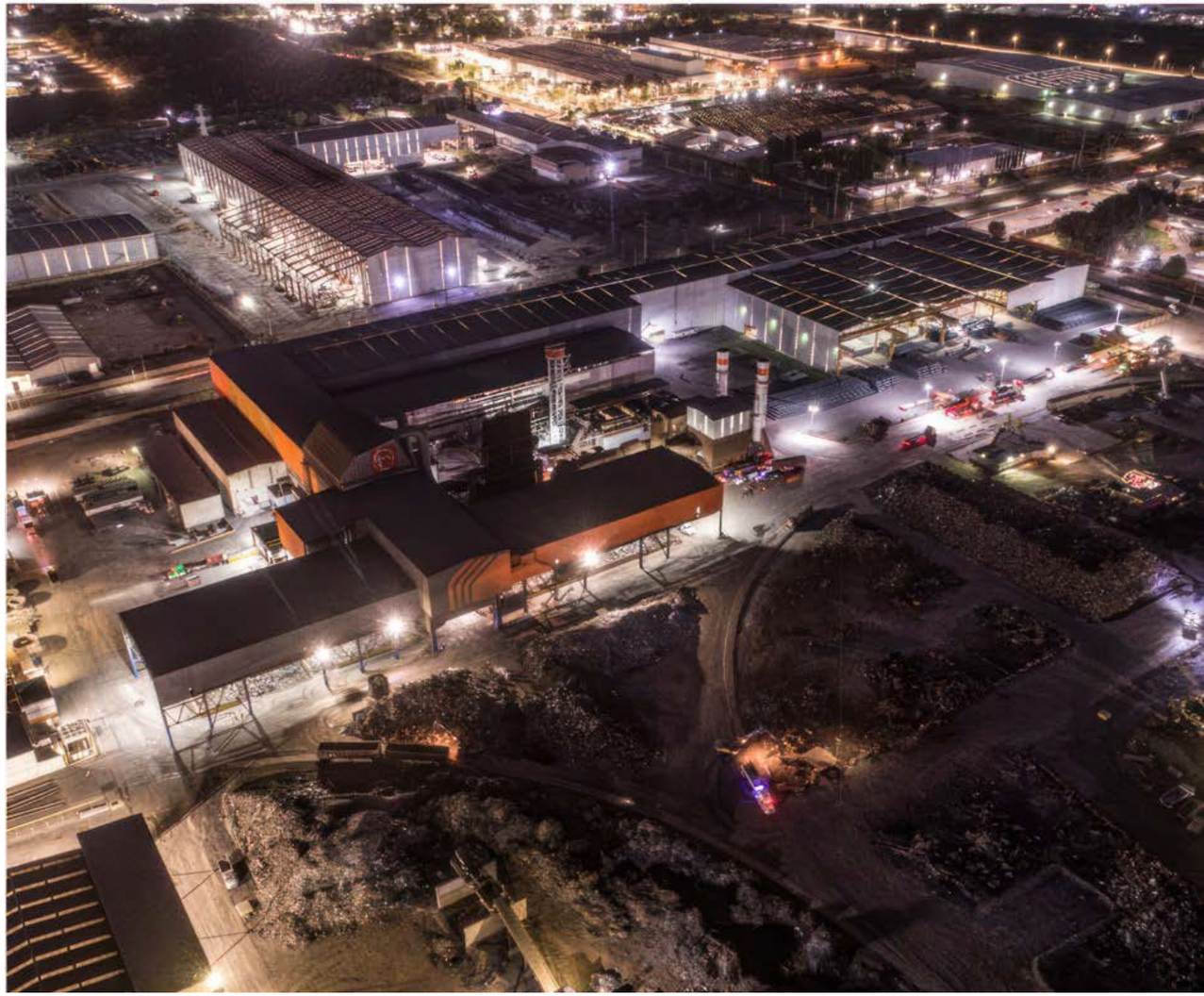
EPD® LATIN AMERICA

GRUPO ACERERO S.A. de CV was born in San Luis Potosí more than 25 years ago, the product of an idea that became a reality and that today is a passion.

It is an expanding Mexican company, located in the center of the country, with great diversification in products, which found in scrap recycling the key to having an installed capacity of 1,000,000 tons of products, which has made it the 5th largest rod producer, in addition to venturing as a steel plate producer in Mexico.

Our products become the heart and foundations of multiple projects from which industrial buildings and bridges arise that contribute to the growth of cities throughout Mexico, Latin America and the United States.

The technical knowledge, human capital and experience of each of our collaborators, who proudly belong to the company, make our annual production:



More than **750** thousand tons of liquid steel.

More than **420** thousand tons of rod.

20 thousand tons of wire drawing.

150 thousand tons of wire rod.

Second largest producer of sheet metal in Mexico.

GASA is the fifth largest supplier of steel in Mexico to the industry.

2. GENERAL INFORMATION

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PRODUCT:	STEEL REINFORCING BAR OF SEVERAL CALIBERS MANUFACTURED FROM STEEL SCRAP
Name of the manufacturer:	GRUPO ACERERO S.A. de C.V.
Description of the construction product:	Steel reinforcing bar used to reinforce concrete in the construction industry. The surface of the rebar is corrugated to limit the relative longitudinal movement between the steel and the surrounding concrete.
Declared unit:	1000 kg of steel reinforcing bar manufactured from steel scrap.
Description of the main product components and or materials:	93% Steel manufactured using scrap steel as source of iron.
Life cycle stages not considered:	The modules: A4, A5, B1, B2, B3, B4, B5, B6, B7.
Statement content:	This environmental product declaration is based on information modules that do not cover aspects of construction stage and use. It contains detailed information on the stage of input materials used for the generation of raw material and central process, modules A1, A2, A3, approximations of scenarios C1, C2, C3, C4 and D based on national statistics. • Definition of the product. • Declared unit. • Environmental performance. • Content declaration. • System boundary. • Evidence and verifications.
Comparability of EPD of construction products	The following statement on the requirements for comparability of EPDs, adapted from ISO 14025: “EPDs within the same product category but registered in different EPD programmes, or not compliant with EN 15804, may not be comparable. For two EPDs to be comparable, they must be based on the same PCR (including the same version number) or be based on fully–aligned PCRs or versions of PCRs; cover products with identical functions, technical performances and use (e.g. identical declared/ functional units); have equivalent system boundaries and descriptions of data; apply equivalent data quality requirements, methods of data collection, and allocation methods; apply identical cut–off rules and impact assessment methods (including the same version of characterisation factors); have equivalent content declarations; and be valid at the time of comparison. For further information about comparability, see EN 15804 and ISO 14025.”
Sites for which this EPD is representative	Manufacturing Plant Eje 122 S/N, Esq. Avenida CFE, Zona Industrial 78395 San Luis Potosí, S.L.P México Eje 108 S/N, Zona Industrial 78395 San Luis Potosí, S.L.P México Jose Armando Morquecho amorquecho@fonderia.com Silvia Chávez Ramírez schavez@fonderia.com Tel: +52(444) 8707195 Cel: +52(444)4512935 https://www.grupoacerero.com.mx
Intended Public:	B2B (Business to Business)

3. THE PRODUCT

The steel reinforcing bar (rebar) manufactured by GRUPO ACERERO S.A. de C.V. is used as reinforcement of concrete structures in the construction industry.

The rod manufactured by GRUPO ACERERO complies with the highest quality standards, adhering to national and international standards. NMX-B-506-CANACERO-2019, ASTM-A615M and ASTM-A706M
In addition, special orders of products with different physical and chemical characteristics are manufactured according to the requirements of our market (weldability, ductility, diameters and lengths).

The characteristics of steel reinforcing bars produced by GRUPO ACERERO are provided hereafter:

Technical specifications:

No. Rod designation	Measure	Diametre			Cross-sectional area	Nominal weight	
		in	mm	in²	mm²	lb/ft	kg/m
3	3/8”	0.375	9.5	0.11	71	0.376	0.560
4	1/2”	0.500	12.7	0.20	127	0.668	0.994
5	5/8”	0.625	15.9	0.31	198	1.043	1.552
6	3/4”	0.750	19	0.44	285	1.502	2.235
8	1”	1.000	25.4	0.79	507	2.670	3.973
10	1” 1/4	1.270	31.8	1.27	794	4.303	6.225
12	1” 1/2	1.500	38.1	1.76	1140	6.464	8.938

Table 1. Technical specifications NMX-B-506

No. Rod designation	Measure	Diametre			Cross-sectional area	Nominal weight	
		in	mm	in²	mm²	lb/ft	kg/m
4	1/2”	0.500	12.7	0.20	127	0.668	0.994
5	5/8”	0.625	15.9	0.31	198	1.043	1.552
6	3/4”	0.750	19	0.44	285	1.502	2.235
8	1”	1.000	25.4	0.79	507	2.670	3.973
10	1” 1/4	1.270	31.8	1.27	794	4.303	6.225

Table 2. Technical specifications ASTM A706/A706 M

3. THE PRODUCT

Dialing

a	**Manufacturer identification**	**GASA**
b	No. Rod designation	3,4,5,6,8,10,12
c	Designation of the standard (NMX–B–506–CANACERO–2019)	N
	Standard designation (Standard ASTM A–706)	W
	Standard designation (Standard /ASTM A–615)	S
	Standard designation (Standard ASTM A–706/ASTM A–615)	WS
d	Rod Grade Identification	42, 52, 60
e	Denomination of the country of origin “Mexico”	MEX

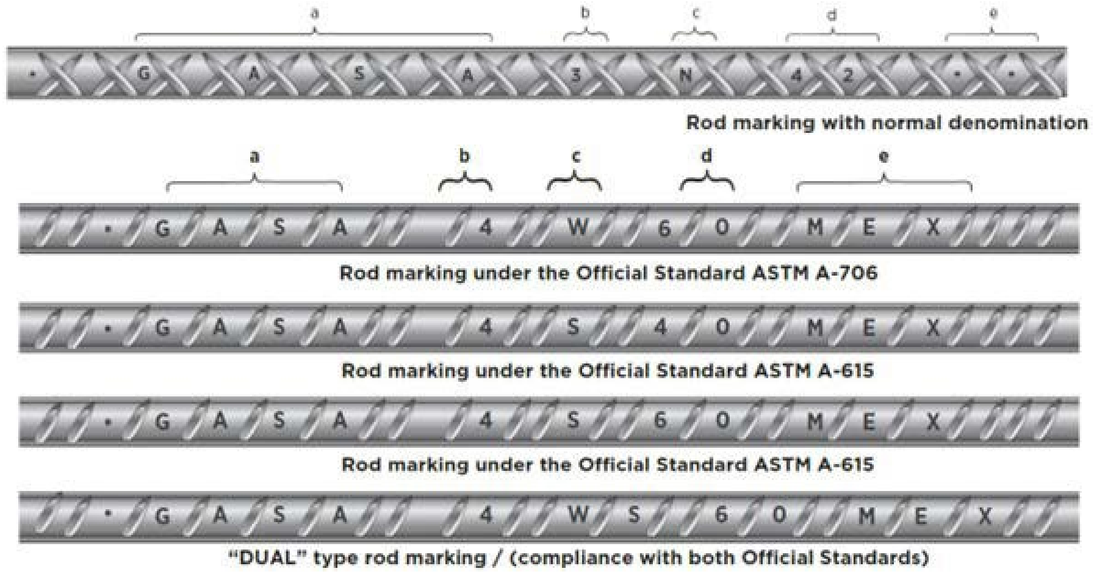

Table 3. Mechanical properties

4. CONTENT DECLARATION

The steel rebar manufactured from steel scrap is produced in an electric arc furnace with a percentage greater than 93% of recycled material, the material contained in this product is found in Table 5. The total raw materials that make up the product were not declared, only the materials with a more representative percentage that make up the billet.

For reasons of confidentiality, a more detailed description of the composition of the Billet is not made, which is the primary raw material of the steel rebar.

Homogeneous Material or Chemical Substances	Chemical Substances	Weight (%)	Material weight pre and post consumer (%)	CAS Number	Function of Chemical Substance	Health class[1]
Steel scrap	Not applicable	>93 %	93%	Not applicable	Iron content in steel	Not listed
Anthracite	Anthracite	1 %	0%	8029–10–5	Carbon content in steel	Not listed
Ferro silico manganese	Manganese and silicon	1 %	0%	8029–10–5	Carbon content in steel	Not listed
Dolomite	Calcium carbonate magnesium	2 %	0%	16389–88–1	Iron ore sintering agent steel foundry	Not listed
Others	Not applicable	<1 %	0%	Not applicable	Carbon content in steel	Not listed

*Steel manufactured in the Industrial Center of GRUPO ACERERO uses 100% steel scrap as source of iron.

** Packaging: The product transported to customers packed with a steel rebar and a label detailing the product information, but this is an insignificant quantity, which not included in the previous table.

1 According to EN15804 declaration of material content of the product shall List of Substances of Very High Concern (SVHC) that are listed by European Chemicals Agency.

Table 5. Content product.

5. RECYCLED MATERIAL CONTENT

In the Industrial Center of GRUPO ACERERO manufactured the steel rebar is manufactured from steel scrap with a percentage greater than or equal to 93% of recycled material.

6. DISTRIBUTION PACKAGING

Packaging: The product is sent to the customers in no packaging, only the casting number distinction.

7. BIOGENIC CARBON CONTENT INFORMATION

The biogenic carbon content of the product and packaging is presented in the Table.

Content	Unit	Quantity
Biogenic carbon contained in the product	Kg CO_2eq	1.247

Table 1. Information on biogenic content

8. LCA RULES

Environmental potential impacts were calculated conformity to EN 15804:2012+A2:2019 sustainability of construction works and PCR 2019:14 Construction products Version 1.2.5 UN CPC 4124 bars and rods, hot rolled, of iron or steel. This EPD is in accordance with ISO 14025:2006.

Environmental potential impacts were calculated through Life Cycle Assessment (LCA) methodology conformity to ISO 14040:2006 and ISO 14044:2006. An external third-party verification process of the EPD was conducted according to General Programme Instructions for the International EPD® System Version 4.0. Verification includes a documental review and a validation of both the underlying LCA study and documents describing additional environmental information that justify data provided in the EPD.

8.1 Declared unit

1000 kg of steel rod manufactured from billets that uses 93% ferrous scrap as raw material, manufactured in 2022 by GRUPO ACERERO at the Rolling Plant 108 and Rolling Plant 122 of San Luis Potosí, S.L.P Mexico, used by the steel industry. construction as reinforcement of concrete structures.

8.2 System boundary

The potential environmental impacts were calculated through Life Cycle Assessment (LCA) methodology of steel rebar to ISO 14040:2006 and ISO 14044:2006. This study went through a critical review process in accordance with ISO / TS 14071: 2014.

According to EN 15804 section 5.2 the following type of EPD is "cradle to gate with modules C1–C4 and module D (A1–A3 +C+D)". This EPD is based on information upstream processes and core processes, modules A1 to A3, and approximations of scenarios C1, C2, C3, C4, and D based on construction sector statistics in Mexico (see table 6).

Does not include A4–A5 Construction stage and B Usage stage.

Table 6. System boundary

Life cycle stage	Information about the modules contained in the stages	DAP			
		Cradle-to-gate with modules C1-C4 and module D	Cradle-to-gate with modules C1-C4, module D and optional modules	From cradle to grave and module D	EPD construction services: Cradle to door with modules A1-A5 and optional modules
A1–A3 products stage	A1) Raw material procurement	Mandatory	Mandatory	Mandatory	Mandatory
	A2) Transport				
	A3) Manufacture				
A4–A5 Construction stage	A4) Transport	–	Optional for goods Required for services	Mandatory	Mandatory
	A5) Construction / installation				
B Usage stage	B1) Use	–	Optional	Mandatory	Mandatory
	B2) Maintenance				
	B3) Reparation				
	B4) Replacement				
	B5) Remodeling				
	B6) Operational energy use				
	B7) Operational water use				
C End of life stage	C1) Deconstruction, demolition	Mandatory	Mandatory	Mandatory	Optional
	C2) Transport				
	C3) Waste processing				
	C4) Final disposition				
D Benefits and charges beyond the system limit	D) Reuse, recycling or energy recovery potential.	Mandatory	Mandatory	Mandatory	–
Declared unit	Inclusion of reference useful life	Optional	Mandatory	Mandatory	–

8. LCA RULES

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Table 7. Description of the modules included in this DAP.

	Product stage			Construction process phase		Usage stage						End of life stage				Resource recovery stage
	Raw material supply	Transport	Manufactu-ring	Trans-port	Construc-tion facility	Use	Mainte-nance	Repair	Restora-tion	Operational energy use	Operatio-nal use of water	Demolition/ Deconstruction	Transport	Waste processing	Disposal	Reuse – Recovery – Recycling - potential
Module	A1	A2	A3	A4	A5	B1	B2	B4	B5	B6	B7	C1	C2	C3	C4	D
Declared modules	X	X	X	ND	ND	ND	ND	ND	ND	ND	ND	X	X	X	X	X
Geography	MX	MX	MX	ND	ND	ND	ND	ND	ND	ND	ND	MX	MX	MX	MX	MX
Specific data used	>90%			–	–	–	–	–	–	–	–	–	–	–	–	–
Product variation	NR			–	–	–	–	–	–	–	–	–	–	–	–	–
Site variation	NR			–	–	–	–	–	–	–	–	–	–	–	–	–

X = Declared module; ND = No declared module; MX= México

8. LCA RULES

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8.3 Description of information modules

A1) Raw materials supply	A2) Transportation	A3) Manufacturing	C) End of life	D) Benefits and charges beyond the system limit
• Consumption and production of raw materials the billet. • Consumption and production of electrical energy. • Consumption and production of natural gas.	• Transport distance of raw materials and supplies to the manufacturing site. • Fuel consumption and emissions related to transportation requirements. • Transportation distance for waste disposal and treatment.	• Consumption of auxiliary inputs. • Consumption and production of water. • Air emissions • Waste generation. • Waste treatment processes, consumption of related materials and energy.	• Demolition • Transport final destination • What can be recycled. • What goes to fill what is wasted and not recycled.	• The avoided loads, benefits of stopping the production of the mineral billet

The manufacturing process is described in Figure 1:

Flow Diagram of steel rebar manufactured from steel scrap

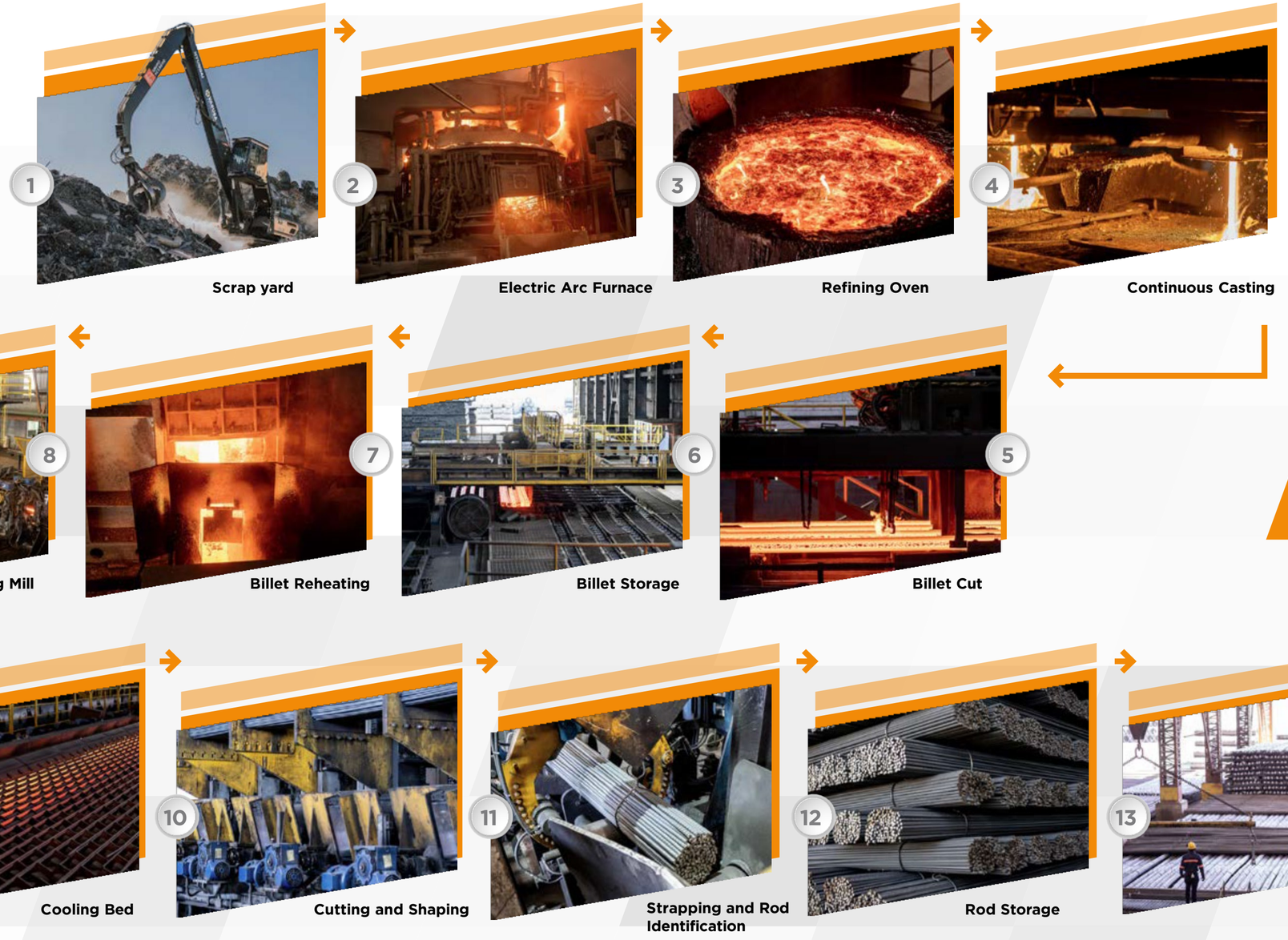

Figure 3. Flow diagram of the rolling mill for the manufacture of steel rod from scrap by GRUPO ACERERO.

8. LCA RULES

8.5 Assumptions

The assumptions related to the steel rebar manufacturing process are presented below.

- The scenarios and distances associated with modules C1) De–construction – demolition, C2) Transport, C3) Waste processing, C4) Disposal and D) Potential for reuse, recycling or energy recovery in the future.
- According to the Latin American Steel Association (ALACERO, 2022), in Mexico, 98% of the steel generated during the demolition of construction buildings is recycled, and only 2% reaches the landfill.
- On the other hand, according to Javeriana University (Pontificia Universidad Javeriana, Faculty of Engineering, 2014) the fuel con–sumption involved during the demolition of buildings corresponds to 960 liters for the use of a backhoe, 1,590 liters for the use of a bac–khoe loader, 432 liters for the use of a mobile crusher. In this same process, the emissions of particulate matter associated with the de–molition were obtained from Ecoinvent 3.9 "Waste concrete, not rein–forced {CH}| treatment of, recycling | Cut–off, U".
- For the transport of waste, an average distance in the State was assumed, corresponding to 250.71 km and one truck (capacity greater than 32 tons).

8.6 Cut-off criteria

All flows of fuel, energy, materials and supplies necessary for the production of the steel rebar have been considered; materials that could be used in preventive or corrective maintenance of machinery and equipment were disregarded, as well as the use of uniforms and personal protective equipment or other auxiliary materials, leaving out textile impregnated with oils or plastics and the final disposal of these as hazardous waste.

8.7 Allocation

In the life cycle inventory, the materials necessary for the manufacture of the recycled billet as the main raw material and subsequently of the corrugated rod are contemplated according to the declared unit, the allocation of materials is made for 99.4% that corresponds to the rod, while 0.2% corresponds to the generation of slag and finally 0.4% to the metal losses.

Subproducto	Cantidad	Unidad	Asignación
Slag	0.004	t	0.4%
Metal losses	0.002	t	0.2%
Rod	1	t	99.4%
Total	1.006	t	100%

Table 12. Allocation of by–products Steel rebar.

8.8 Time representativeness

Direct data obtained from GRUPO ACERERO is representative for 2022.

9. ENVIRONMENTAL PERFORMANCE

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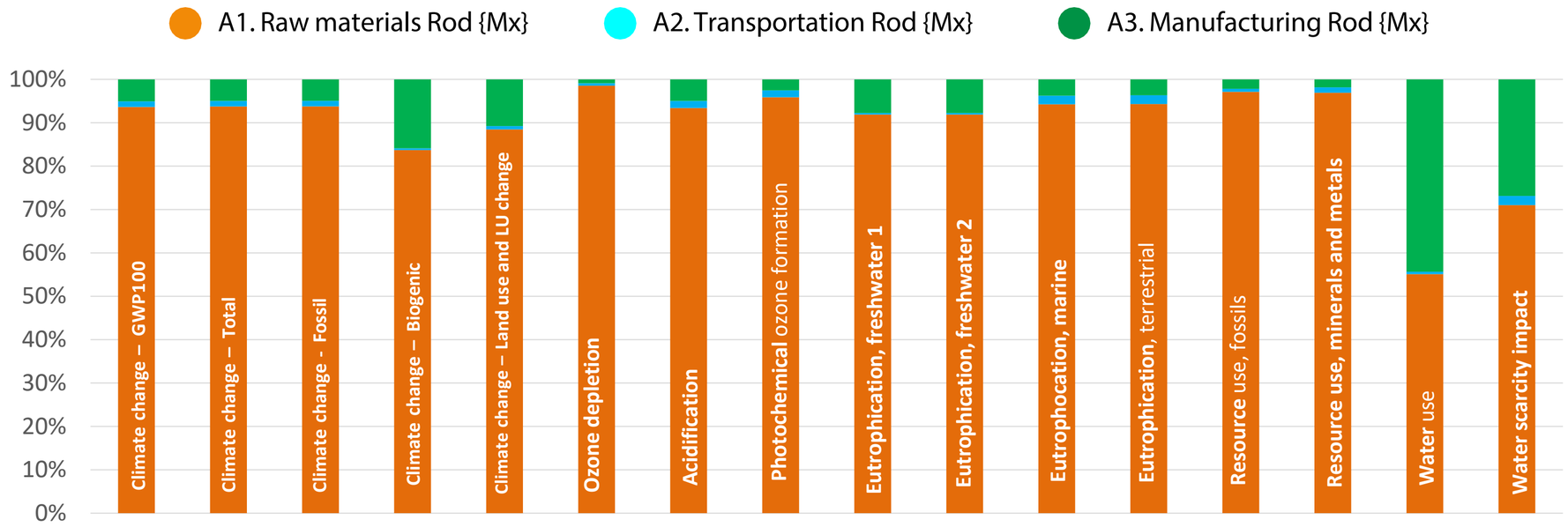
9.1 Potential environmental impact

All information modules are reported and valued separately. However, in the present EPD presents itself the total impact across all stage.

In the graph that appears below, you can see the contributions to the different categories of environmental impact, for each of the modules that contemplates the life cycle of the steel rebar manufactured by GRUPO ACERERO, which presents the results of the extraction from raw materials to the manufacturing process.

As can be seen, the greatest environmental impacts are generated by module A1, which corresponds to the extraction of the raw material necessary for the manufacture of the product, showing a greater contribution in the category of formation of ozone layer depletion with a percentage of 96.05% and the formation of photochemical ozone with a contribution above 90.95%. The smallest contributions to the impact are found in module A2, which corresponds to the transportation module. Additional impact categories are discussed below.

Figure 4. A1–A3 Basic impact categories results.



Basic impact categories	Unidad	A1 – A3	C1) Demolition	C2) Waste transport	C3) Waste treatment	C4) Waste disposal	D) Benefits and charges beyond the system boundary, recycling scenario
Climate change– GWP[1]	kg CO_2 eq	3.31E+02	1.93E+03	2.55E+01	0.00E+00	7.10E+00	3.01E+03
Climate change– total	kg CO_2 eq	3.46E+02	2.09E+03	2.61E+01	0.00E+00	7.26E+00	3.15E+03
Climate change– Fuel	kg CO_2 eq	3.45E+02	2.09E+03	2.61E+01	0.00E+00	7.18E+00	3.14E+03
Climate change– Biogenic	kg CO_2 eq	3.85E-01	8.42E-01	1.04E-02	0.00E+00	9.82E-03	6.20E+00
Climate change – Land use and LU change	kg CO_2 eq	2.89E-01	5.64E-01	1.32E-02	0.00E+00	2.56E-03	1.63E+00
Ozone depletion	kg CFC11 eq	1.27E-05	1.31E-04	4.34E-07	0.00E+00	3.61E-08	7.04E-05
Acidification	mol H+ eq	1.64E+00	1.07E+01	8.25E-01	3.51E-01	2.47E-02	1.33E+01
Photochemical ozone formation	kg NMVOC eq	1.98E+00	9.03E-02	2.14E-03	0.00E+00	1.83E-03	1.33E+00
Eutrophication, freshwater 1	kg P eq	9.03E-02	2.77E-01	6.57E-03	0.00E+00	5.61E-03	4.08E+00
Eutrophication, freshwater 2	kg PO_4 eq	2.77E-01	2.06E+00	1.84E-02	0.00E+00	6.80E-03	3.08E+00
Eutrophication, marine	kg N eq	4.37E-01	1.87E+01	1.90E-01	0.00E+00	7.51E-02	3.26E+01
Eutrophication, terrestrial	mol N eq	4.56E+00	1.74E+01	1.01E-01	0.00E+00	2.17E-02	1.51E+01
Resource use, fossils*	MJ	9.48E+03	1.27E+05	3.85E+02	0.00E+00	4.35E+01	4.33E+04
Resource use, minerals and metals*	kg Sb eq	8.73E-04	1.26E-03	7.14E-05	0.00E+00	1.77E-05	2.20E-02
Water use	m^3 depriv.	5.46E+01	1.71E+02	1.98E+00	0.00E+00	8.70E-01	6.16E+02
Water scarcity impact	m^3 H_2O eq	1.52E+01	1.93E+03	2.55E+01	0.00E+00	7.10E+00	3.01E+03

1 This indicator accounts for all greenhouse gases except biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. As such, the indicator is identical to GWP-total except that the CF for biogenic CO2 is set to zero.

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

Table 14. A1–A3 Basic impact categories results

9. ENVIRONMENTAL PERFORMANCE

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9.2 Use of resources

Parameters describing resource use were evaluated with the Cumulated Energy Demand method version 1.09 (Frischknecht et al. 2007) except for the indicator of use of net fresh water that was evaluated with Recipe 2016 Midpoint (H) version 1.00 (Huijbregts et al. 2017). The detailed description of the use of resources is provided in **Table 15.**

Use of resources parameters	Unit	A1 – A3	C1) Demolition	C2) Waste transport	C3) Waste treatment	C4) Waste disposal	D) Benefits and charges beyond the system boundary, recycling scenario
Use of renewable primary energy excluding renewable primary energy resources used as feedstock	MJ	2.35E+02	2.46E+02	4.87E+00	0.00E+00	1.73E+00	2.99E+03
Use of renewable primary energy as raw material	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of renewable primary energy (primary energy and primary energy resources used as feedstock)	MJ	2.35E+02	2.46E+02	4.87E+00	0.00E+00	1.73E+00	2.99E+03
Non-renewable primary energy use excluding renewable primary energy resources used as feedstock	MJ	1.02E+04	1.35E+05	4.09E+02	0.00E+00	4.62E+01	4.62E+04
Use of non-renewable primary energy as raw material	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of non-renewable primary energy (primary energy and primary energy resources used as raw materials)	MJ	1.02E+04	1.35E+05	4.09E+02	0.00E+00	4.62E+01	4.62E+04
Use of secondary materials	kg	1.14E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.98E+00
Use of secondary renewable fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of secondary non-renewable fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of fresh water	m^3	1.60E+00	5.45E+00	6.14E-02	0.00E+00	2.26E-02	1.70E+01

Table 15. Basic impact categories results

9. ENVIRONMENTAL PERFORMANCE

9.3 Other indicators describing waste categories

Environmental indicators describing waste generation were obtained from LCI except for background information which has been calculated using EDIP 2003 method (Hauschild and Potting, 2005). Environmental parameters describing waste generation are provided below:

Table 16. Other indicators describing waste categories.

Output parameter	Unit	A1 – A3	C1) Demolition	C2) Waste transport	C3) Waste treatment	C4) Waste disposal	D) Benefits and charges beyond the system boundary, recycling scenario
Hazardous waste	kg	4.61E-02	8.64E-01	2.43E-03	0.00E+00	1.63E-04	3.00E-01
Non hazardous waste	kg	1.55E+02	4.55E+01	3.35E+01	0.00E+00	4.04E+01	1.33E+03
Radioactive waste*	kg	3.29E-03	5.38E-03	8.40E-05	0.00E+00	1.91E-05	2.83E-02
Components for reuse	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	kg	1.14E+00	0.00E+00	0.00E+00	0.98E+00	0.00E+00	0.00E+00
Materials for energy recovery	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported electricity	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

*No radioactive waste is produced during GRUPO ACERERO operations.

**The column "A3) Manufacturing direct and indirect, refers to direct data and background data regarding production of ancillary materials and other processes outside GRUPO ACERERO's facilities".

10. Differences versus previous versions

The previous version of this EPD was published in 2018 in accordance with PCR Construction Products and Services, V2.2 2012:01. During 2023 the EPD was updated following EN 15804:2012+A2:2019 standard and PCR Construction products 2019:2014 V 1.2.5

11. VERIFICATION AND REGISTRATION

LATIN AMERICA EPD®

CEN STANDARD EN 15804 SERVED AS THE CORE PCR	
Programme	IInternational EPD® System www.environdec.com EPD registered through the fully aligned regional programme/hub: EPD Latin America www.epdlatinamerica.com
Programme operator	EPD International AB Box 210 60 SE–100 31 Stockholm, Sweden EPD Latin America Chile: Alonso de Ercilla 2996, Ñuñoa, Santiago Chile. Mexico: Bosques De Bohemia 2 No. 9, Bosques del Lago. Cuautitlan Izcalli, Estado de México, México.
EPD registration number:	S–P–01234
Date of validity:	2028–11–24
Revision date:	2023–11–24
Date of publication (issue):	2018–10–10
Reference year of data:	2022
Geographical scope:	Mexico, United States, and Latin America
Central product classification:	UN CPC 4124 Bars and rods, hot rolled, of iron or steel
Product category rules:	PCR 2019:14 construction products, Version 1.2.5 (EN15804:2012+A2:2019)
PCR review was conducted by:	The Technical Committee of the International EPD® System. See www.environdec.com/TC for a list of members. Review chair: Claudia A. Peña, University of Concepción, Chile. The review panel may be contacted via the Secretariat www.environdec.com/contact.
Independent verification of the declaration data, according to ISO 14025:2006.	☐ EPD process certification (Internal) ☒ EPD verification (External)
Third–party verifier: Approved by:	Ruben Carnerero Approved EPD verifier r.carnerero@ik–ingenieria.com The International EPD® System
Procedure for follow–up of data during EPD validity involves third–party verifier:	☐ Yes ☒ No

12. CERTIFICATION

LATIN AMERICA EPD®

Recertificación ISO 9001:2015 con alcance de: Planta Laminación Largos 108, Planta Laminación Largos 122 , Planta Planos 124, Planta Trefilados 132 y Corporativo Tangente.
Certificación del Emblema Hecho en México, para toda la familia de productos fabricados, a través del Organismo IMNC (Instituto de Mexicano de Normalización y Certificación A.C).
Certificación de producto bajo la norma NMX-B-506-CANACERO-2019, a través de Organismo NYCE (Instituto de Normalización y Certificación).
Acreditamos nuestros Laboratorios bajo la norma ISO/ IEC 17025 antes la entidad mexicana de acreditación (EMA) a.c
Certificación de producto bajo la norma NTC 2289:2020, a través del Organismo ICONTEC (Instituto Colombiano de Normas Técnicas y Certificación)

13. CONTACT INFORMATION

01

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02

Center for Life Cycle Assessment and Sustainable Design – CADIS

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LCA Study: Life Cycle Assessment (LCA) methodology of steel rebar manufactured from steel scrap.

LCA Authors: Luque Claudia, Duarte Nathalia

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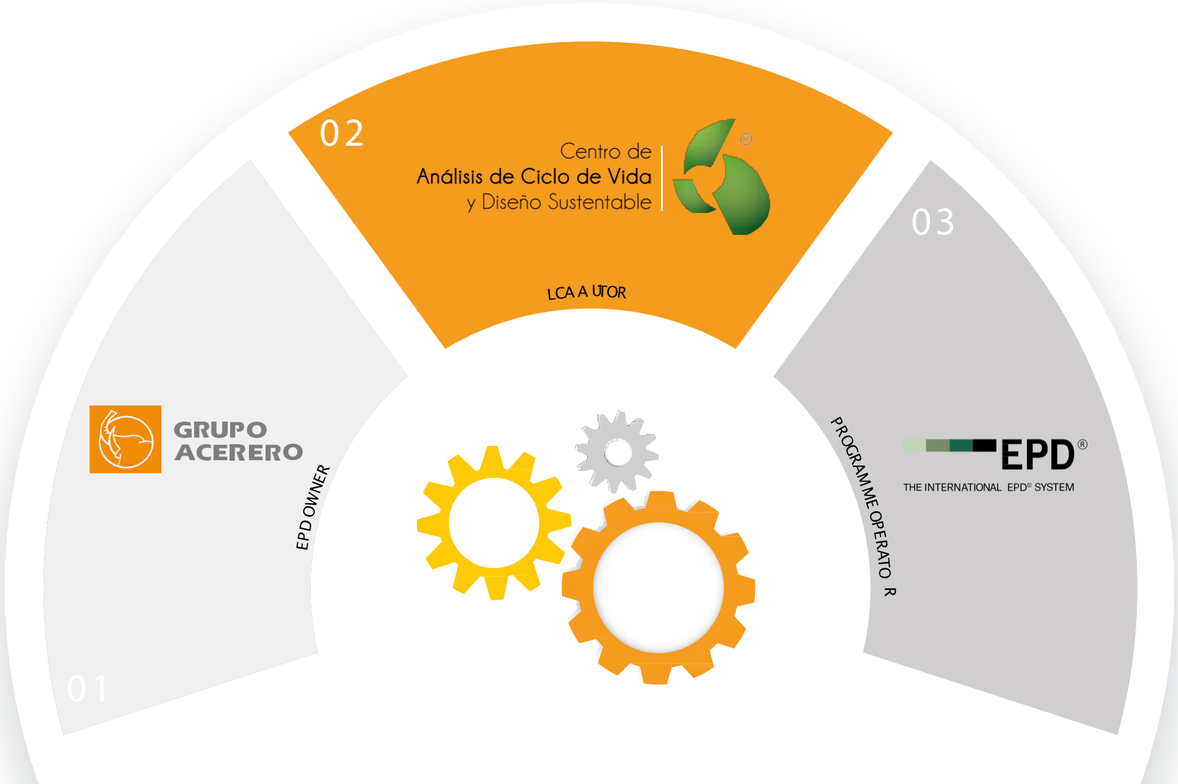

03

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