



# ENVIRONMENTAL PRODUCT DECLARATION

In compliance with ISO 14025 and EN15804+A2:2019

## DRAWN STEEL WIRE

**Program operator:** EPDITALY  
**Published by:** S.I.A.T. S.p.A.  
**Declaration n.:** EPD\_Filo\_SIAT\_2024

**EPDITALY registration code :** EPDITALY0918

**Published:** 25/06/2025  
**Valid until:** 25/06/2030  
**Production site:** Gemona and Osoppo (UD)



# General information



*Environmental declarations published within the same product category, but belonging to different programs, might not be comparable. Specifically, EPDs regarding products for the building sector may not be comparable if not compliant with the EN 15804 standard.*

*The EPD Owner releases EPDIItaly from any non-compliance with environmental legislation. The declaration holder shall be responsible for the information and supporting evidence provided. EPDIItaly declines any responsibility regarding the information, data, and results supplied by the EPD Owner for the life cycle assessment.*

**REFERENCE DOCUMENTS:** This declaration was drafted following EDPIItaly's General Programme Instruction, available on [www.epditaly.it](http://www.epditaly.it).

**PCR ICMQ-001/15 rev.3.1**

**CPC CODE:** 4124

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## INDEPENDENT VERIFICATION OF DECLARATION AND DATA CARRIED OUT ACCORDING TO ISO 14025

EPD Process certification (Internal)

EPD Verification (External)

# General information



## **EPD OWNER:**

S.I.A.T. S.p.A  
Via Facini, 54  
Gemona del Friuli (UD), Italia.

## **PROGRAM OPERATOR:**

EPDITALY  
Via Gaetano de Castilla 10  
Milano (MI), Italia.

## **INDEPENDENT EVALUATION BY :**

ICMQ S.p.A.  
Via Gaetano de Castilla 10  
Milano (MI), Italia.

## **PLANT LOCATION :**

**S.I.A.T. S.p.A**  
Via Facini, 54  
Gemona del Friuli (UD), Italia

**S.I.A.T. S.p.A. – Divisione PITTARC**  
Via della Cartiera, 3  
Osoppo (UD), Italia

# Company profile



Pittini Group, with more than 60 years of experience in the steel sector, is an international reference in the production of **long steel products** for **mechanical industry** and **building sector**.

With a production of almost 3 million tons per year, 18 manufacturing and logistics facilities and 1,800 workers, Pittini Group is a strong company, focused on constant growth, guided by hi-tech investments, product innovation and a strict environmental sustainability policy (**Environmental Management System**, ISO 14001-certified since 2009).

Pittini Group **covers the whole production cycle**: from raw material (recycled ferrous materials) to the finished product, producing billets, wire rod, hot-rolled reinforcing steel bars and coils.

# Scope and EPD type



✓	A1	Raw material supply	<b>PRODUCTION STAGE</b>
✓	A2	Transport	
✓	A3	Manufacturing	
MND	A4	Transport	<b>CONSTRUCTION PROCESS</b>
MND	A5	Construction/installation	
MND	B1	Use	<b>USE</b>
MND	B2	Maintenance	
MND	B3	Repair	
MND	B4	Replacement	
MND	B5	Refurbishment	
MND	B6	Operational energy use	
MND	B7	Operational water use	
✓	C1	De-commissioning \ Demolition	<b>END OF LIFE</b>
✓	C2	Transport	
✓	C3	Waste processing	
✓	C4	Disposal	
✓	D	Reuse \ Recovery \ Recycling potential	<b>BENEFITS AND LOADS BEYOND THE SYSTEM BOUNDARY</b>

MND=Module Not Declared

**MODULES:** The system modules include the compulsory modules A1, A2, A3, C1, C2, C3, C4 and D as per EN 15804 standard, following a “from cradle to gate with modules C1-C4 and D” approach.

**EPD TYPE:** Specific for the drawn wires in coils produced in Gemona del Friuli and Osoppo (UD).

**GEOGRAPHICAL LOCATION:** Performances were calculated considering the plants of Gemona del Friuli and Osoppo. The reference market is european.

**DATABASE:** Ecoinvent 3.10

**SOFTWARE:** SimaPro 9.6.0.1

**REFERENCE YEAR:** 2023

**ELECTRICITY FROM GRID (GWP 100):** 0,649 kg CO<sub>2</sub>e/kWh

# The product: drawn wire



## DECLARED UNIT: 1000 kg of drawn wire

SIAT S.p.A. manufactures high-quality bright drawn wire with low and medium carbon content, suitable for surface treatments such as chrome plating, galvanizing, plastic coating, painting, and nickel plating.

The use of wire rod produced in the Pittini Group steel mills ensures control, uniformity, and consistency of the mechanical properties of the drawn wire, making it particularly suitable for processing with automatic systems.

Control over the entire production cycle and consistent supply of raw materials (wire rod) result in uniform quality across all production.

State-of-the-art, versatile, and flexible equipment allows for a wide range of bright drawn wire in various diameters and packaging formats, with the possibility of custom production based on specific customer requests.

The production range spans from 2.0 mm to 14.5 mm in various packaging formats: coils, spools and bundles.

*Drawn steel wire produced in Gemona del Friuli and Osoppo **does not contain** substances included in the “Candidate list of substances of very high concern (SVHC)”.*



# Main raw materials

Main raw materials used to produce drawn wire are:



**WIRE ROD**

The main material used



**SULPHURIC ACID**



**STEARATE**

# Scope and EPD type



## DESCRIPTION OF THE PROCESSES INCLUDED:

**Transport of material from production sites** to Gemona del Friuli and Osoppo has been included.

All **transports of raw materials from suppliers** to the production plants are included in the primary-information model.

**INVENTORY QUANTITY**, expressed in kgkm, is defined as the product between the mass of the material and the distance covered.

**Processing of materials** entering the plants, the **process of wire drawing and all activities** to obtain drawn wire are included.

**A1 ENERGY AND RAW MATERIAL SUPPLY**

**A2 TRANSPORT**

**A3 MANUFACTURING (WASTE PROCESSING, ANCILLARY MATERIALS, EMISSIONS)**

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# Scope and EPD type



Following the review of the EN 15804 standard, groups C1, C2, C3, C4 and D have been included.

The groups C1-C4 include the impacts associated with the removal of the material from the building in which it is installed, the transport of the waste to the treatment center and the related activities (recycling, treatment ecc.), including the disposal in landfill.

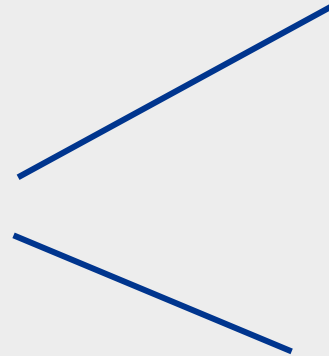
The group D, includes the benefits coming from the outputs of recycling (intended as avoided products) and energy recovery operations.

- C1** DE-CONSTRUCTION/DEMOLITION
  - C2** TRANSPORT
  - C3** WASTE PROCESSING
  - C4** DISPOSAL
  - D** REUSE-RECOVERY-RECYCLING POTENTIAL
-

# Scope and EPD type



**PREPARATION FOR  
WIRE DRAWING  
PROCESSES**



**Wire rod preparation (outsourcing):**  
annealing;

**Wire rod processing:**  
pickling;

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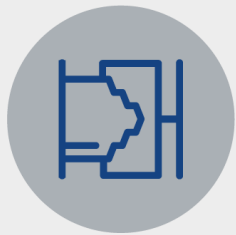
# Scope and EPD type



**IN-HOUSE  
TRANSPORT  
AND OPERATING  
MACHINES USED**

- Inbound transport** of materials by truck
- In-house handling** of the wire rod with forklift
- In-house handling** of finished product with forklift and crane
- Transport of waste** to destination facilities
- Transport of finished products** by truck

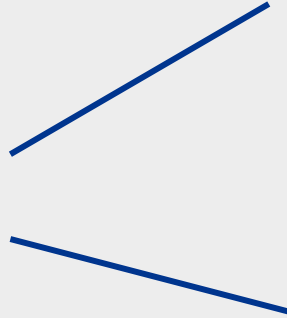
# Scope and EPD type



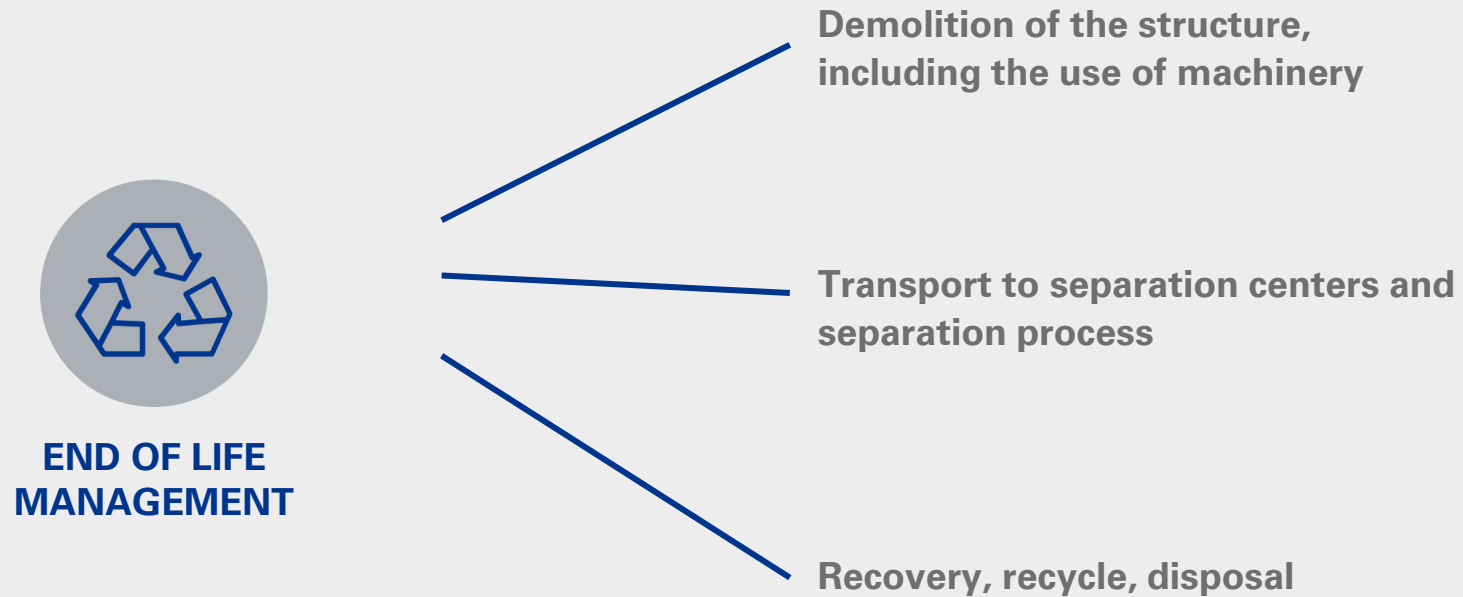
**WIRE DRAWING**

**Blasting**

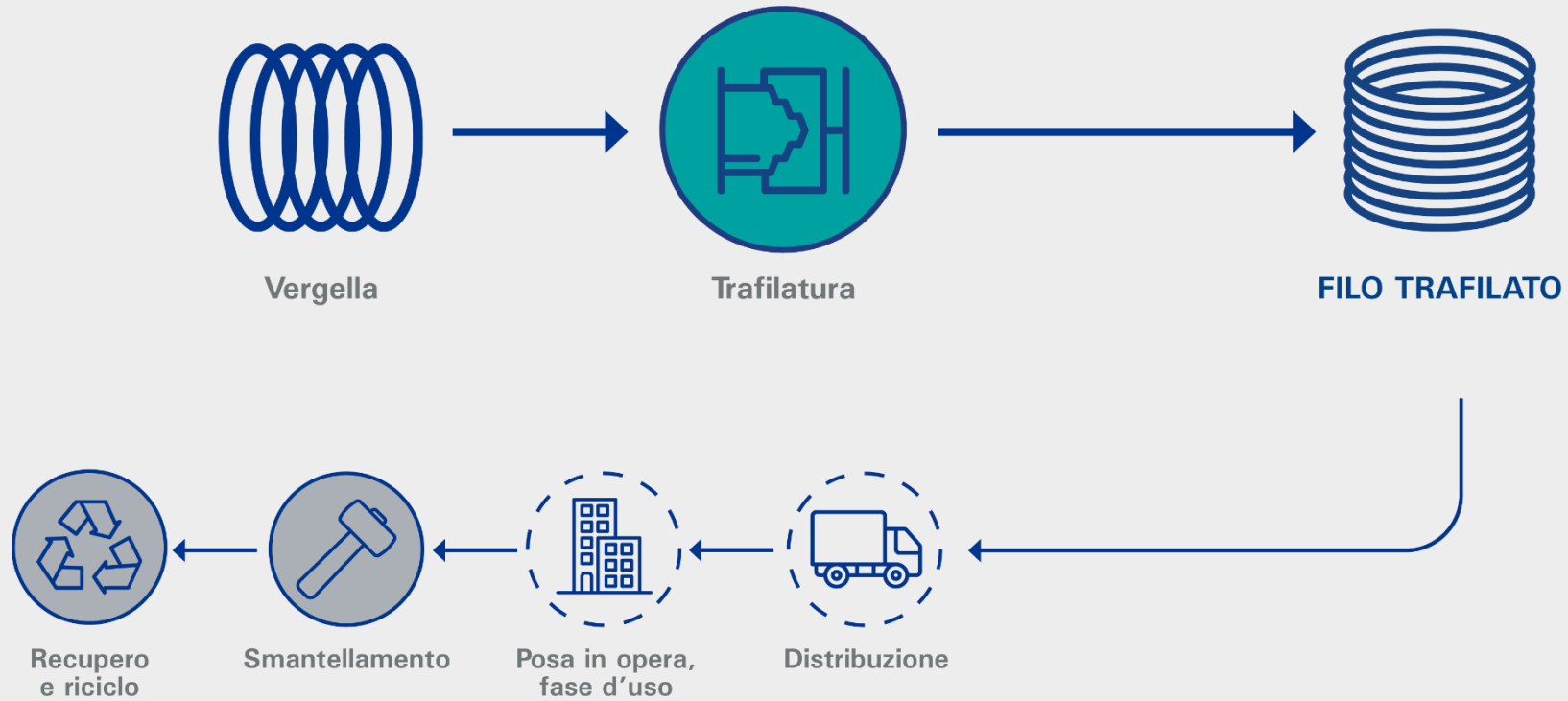
**Wire drawing**



# Scope and EPD type




# Scope and EPD type



# Environmental performance: drawn wire



Data referring to 1,000 kg of drawn wire

 ENVIRONMENTAL IMPACT PARAMETERS	UNIT	A1	A2	A3	A1-A3	A4, A5, B1 ÷ B7	C1	C2	C3	C4	D
<b>GWP-total</b>	kg CO2 eq	1,06E+3	1,39E+1	2,37E+1	<b>1,09E+3</b>	MND	6,57E+0	1,55E+1	1,24E+0	8,63E-1	-1,40E+1
<b>GWP-biogenic</b>	kg CO2 eq	1,90E+1	6,57E-2	1,21E-3	<b>1,91E+1</b>	MND	1,02E-3	5,14E-3	4,41E-2	2,86E-4	-1,05E-2
<b>GWP-fossil</b>	kg CO2 eq	1,04E+3	1,39E+1	2,37E+1	<b>1,07E+3</b>	MND	6,57E+0	1,55E+1	1,19E+0	8,62E-1	-1,40E+1
<b>GWP-luluc</b>	kg CO2 eq	8,15E-1	5,15E-3	3,42E-2	<b>8,54E-1</b>	MND	2,26E-4	3,85E-4	3,54E-3	2,40E-5	1,33E-4
<b>ODP</b>	kg CFC11 eq	1,92E-5	2,68E-7	2,41E-7	<b>1,97E-5</b>	MND	1,03E-7	3,20E-7	1,88E-8	1,68E-8	-4,33E-8
<b>AP</b>	mol H+ eq	3,23E+0	6,61E-2	8,62E-2	<b>3,39E+0</b>	MND	6,14E-2	8,43E-2	6,28E-3	5,27E-3	-5,30E-2
<b>EP-freshwater</b>	kg P eq	1,69E-1	1,60E-4	5,74E-5	<b>1,69E-1</b>	MND	6,21E-6	1,31E-5	1,09E-4	1,18E-6	-6,10E-4
<b>EP-marine</b>	kg N eq	7,77E-1	2,72E-2	1,61E-2	<b>8,21E-1</b>	MND	2,89E-2	3,88E-2	1,05E-3	2,42E-3	-1,12E-2
<b>EP-terrestrial</b>	mol N eq	8,05E+0	2,99E-1	9,21E-2	<b>8,44E+0</b>	MND	3,17E-1	4,24E-1	1,17E-2	2,65E-2	-1,31E-1
<b>POCP</b>	kg NMVOC eq	2,41E+0	9,84E-2	5,45E-2	<b>2,56E+0</b>	MND	9,41E-2	1,33E-1	3,77E-3	8,20E-3	-4,47E-2
<b>ADP-minerals&amp;metals*</b>	kg Sb eq	1,71E-3	5,04E-7	6,69E-7	<b>1,71E-3</b>	MND	2,75E-7	5,18E-7	7,28E-8	2,98E-8	-1,00E-4
<b>ADP-fossil*</b>	MJ	1,21E+4	2,85E+1	1,00E+1	<b>1,22E+4</b>	MND	9,28E-1	2,07E+0	1,97E+1	1,88E-1	-1,07E+2
<b>WDP*</b>	m3 depriv.	3,61E+2	4,73E-1	1,38E+1	<b>3,75E+2</b>	MND	6,81E-2	8,78E-2	2,94E-1	5,84E-3	-8,84E-1
<b>Acronyms</b>	GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption										


MND=Module Not Declared; **The additional impact indicators calculated into the LCA study are not included in the present declaration.**

\* The results of these environmental impact indicators shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.

# Environmental performance: drawn wire



Data referring to 1,000 kg of drawn wire


 RENEWABLE RESOURCES	UNIT	A1	A2	A3	A1-A3	A4, A5, B1 ÷ B7	C1	C2	C3	C4	D
Use of renewable primary energy excluding renewable primary energy resources used as raw materials (PERE)	MJ	4,49E+2	8,01E+0	4,03E+0	<b>4,61E+2</b>	MND	1,72E-1	6,42E-1	6,66E+0	3,41E-2	-5,34E+0
Use of renewable primary energy resources used as raw materials (PERM)	MJ	1,85E+2	1,29E+0	1,74E+0	<b>1,88E+2</b>	MND	2,21E-2	9,02E-2	8,85E-1	8,74E-3	-6,41E-1
Total use of renewable primary energy resources (PERT)	MJ	6,34E+2	9,29E+0	5,77E+0	<b>6,49E+2</b>	MND	1,94E-1	7,32E-1	7,54E+0	4,29E-2	-5,98E+0

MND=Module Not Declared

# Environmental performance: drawn wire



Data referring to 1,000 kg of drawn wire



 <b>NON-RENEWABLE RESOURCES</b>	UNIT	A1	A2	A3	A1-A3	A4, A5, B1 ÷ B7	C1	C2	C3	C4	D
<b>Use of non renewable primary energy excluding non renewable primary energy resources used as raw materials (PENRE)</b>	MJ	1,21E+4	2,85E+1	1,01E+1	1,22E+4	MND	9,28E-1	2,07E+0	1,97E+1	1,88E-1	-1,07E+2
<b>Use of non renewable primary energy resources used as raw materials (PENRM)</b>	MJ	0,00E+0	0,00E+0	0,00E+0	0,00E+0	MND	0,00E+0	0,00E+0	0,00E+0	0,00E+0	0,00E+0
<b>Total use of non renewable primary energy resources (PENRT)</b>	MJ	1,21E+4	2,85E+1	1,01E+1	1,22E+4	MND	9,28E-1	2,07E+0	1,97E+1	1,88E-1	-1,07E+2

MND=Module Not Declared)

# Environmental performance: drawn wire



Data referring to 1,000 kg of drawn wire


 <b>USE OF SECONDARY RAW MATERIALS</b>	UNIT	A1	A2	A3	A1-A3	A4, A5, B1 ÷ B7	C1	C2	C3	C4	D
Use of secondary materials (SM)	Kg	9,32E+2	0,00E+0	0,00E+0	9,32E+2	MND	0,00E+0	0,00E+0	0,00E+0	0,00E+0	0,00E+0
Use of renewable secondary fuels (RSF)	MJ	0,00E+0	0,00E+0	0,00E+0	0,00E+0	MND	0,00E+0	0,00E+0	0,00E+0	0,00E+0	0,00E+0
Use of non renewable secondary fuels (NRSF)	MJ	0,00E+0	0,00E+0	0,00E+0	0,00E+0	MND	0,00E+0	0,00E+0	0,00E+0	0,00E+0	0,00E+0
 <b>USE OF FRESH WATER</b>	UNIT	A1	A2	A3	A1-A3	A4, A5, B1 ÷ B7	C1	C2	C3	C4	D
Net use of fresh water (FW)	m3	9,74E+0	3,46E-2	3,21E-1	1,01E+1	MND	2,53E-3	5,25E-3	2,26E-2	3,04E-4	-5,30E-2

MND=Module Not Declared

# Environmental performance: drawn wire



Data referring to 1,000 kg of drawn wire

 WASTE DISPOSAL	UNIT	A1	A2	A3	A1-A3	A4, A5, B1 ÷ B7	C1	C2	C3	C4	D
<b>Hazardous waste disposed (HWD)</b>	kg	1,26E-1	1,11E-3	5,06E-4	<b>1,27E-1</b>	MND	5,94E-4	1,37E-3	4,19E-5	7,56E-5	-1,46E-3
<b>Non-hazardous waste disposed (NHWD)</b>	kg	1,72E+2	2,62E-2	1,87E+0	<b>1,73E+2</b>	MND	2,53E-3	6,31E-3	1,56E-2	5,99E+1	-8,92E-2
<b>Radioactive waste disposed (RWD)</b>	kg	1,76E-2	2,86E-4	5,81E-5	<b>1,80E-2</b>	MND	4,42E-6	1,94E-5	1,98E-4	1,00E-6	1,39E-4
<b>Components for re-use (CRU)</b>	kg	0,00E+0	0,00E+0	0,00E+0	<b>0,00E+0</b>	MND	0,00E+0	0,00E+0	0,00E+0	0,00E+0	0,00E+0
<b>Materials for Recycling (MFR)</b>	kg	0,00E+0	0,00E+0	0,00E+0	<b>0,00E+0</b>	MND	0,00E+0	0,00E+0	9,40E+02	0,00E+0	0,00E+0
<b>Materials for Energy Recovery (MER)</b>	kg	0,00E+0	0,00E+0	0,00E+0	<b>0,00E+0</b>	MND	0,00E+0	0,00E+0	0,00E+0	0,00E+0	0,00E+0
<b>Exported Energy (EE)</b>	MJ	0,00E+0	0,00E+0	0,00E+0	<b>0,00E+0</b>	MND	0,00E+0	0,00E+0	0,00E+0	0,00E+0	0,00E+0

MND=Module Not Declared

The biogenic carbon content in the product and in the packaging has been omitted since its weight is lower than 5%

# Calculation rules



**DECLARED UNIT:** 1000 kg of drawn wire

**ASSUMPTIONS:** System boundaries include the compulsory modules A1, A2, A3, C1, C2, C3, C4 and D as required by EN 15804 Standard, according to a “from cradle to gate with modules C1-C4 and D” approach. It should be noted that **building, maintenance and decommissioning of the infrastructures - intended as buildings - and use of industrial ground, were not taken into consideration**, because their contribution to environmental impact relating to the declared unit is deemed negligible. **Consumption of oils, detergents and other technical materials for machine maintenance, energy consumption for plant lighting, energy consumption for office activities related to the management of the steel mill are included.** Moreover, it should be noted that **product distribution, use and disposal phases are not included in this study.**

**CUT-OFF RULES:** The criterion chosen for the initial inclusion of the inbound and outbound elements, takes into account a **1% cut-off level, both in terms of mass, energy and environmental relevance.** This means that a process was neglected if responsible of less than 1% of the total amount of mass, primary energy and total impact. However, all processes for which data are available were taken into account, even though with a contribution less than 1%. As a consequence, this threshold value was used in order to avoid collecting unknown data, not with the purpose of neglecting available data.

**DATA QUALITY:** in the LCA study, **particular relevance was given to primary data collected** through extensive measurements carried out at the plants.

**ALLOCATIONS:** allocation was avoided, whenever possible, by dividing the system into sub-systems. Otherwise, physical allocation was applied. As for waste modeling, the "Polluter pays principle" was applied.

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# Additional information



MINIMUM RECYCLED CONTENT								
RECYCLED, RECOVERED, BY-PRODUCT								
Minimum content of recycled, recovered, by-product materials								
PRODUCT NAME <sup>1)</sup>		Recycled material			Recovered material	By-product material		Total content of Recycled, Recovered, By-product material <sup>2)</sup>
		Total	Pre-consumer	Post-consumer				
		[%]	[%]	[%]	[%]	[%]		[%]
<b>Drawn wire</b>	<b>≥</b>	<b>80%</b>	<b>n.p.d.</b>	<b>80%</b>	<b>n.p.d</b>	<b>n.p.d</b>	<b>80%</b>	
<p>Legenda: n.p.d.: no performance determined</p> <p>Note: 1) All products of every size and color 2) The minimum recycled, recovered, by-product content does not imply that all three types are included in the product. In particular, this value may not correspond to the sum of the minimum content of each fraction.</p>								
Production units: Via Facini, 54, 33013 Gemona UD - Via della Cartiera, 3 Osoppo (UD), Italia								
Methodology for the determination of the recycled/recovered/by-product content: Regulation for the verification and validation of environmental declarations on recycled content into steel products – IGQ – SC026 in compliance with UNI PdR 88:2020								

# References



- **ISO 14040:2006/Amd 1:2020** Environmental management - Life cycle assessment - Principles and framework
- **ISO 14044:2006/Amd 2:2020** Environmental management – Life cycle assessment – Requirements and guidelines – Amendment 1
- **ISO 14020:2000** Environmental labels and declarations -- General principles
- **EN 15804:2012+A2:2019** Sustainability of construction works – Environmental product declarations – Core rules for the product category of construction works
- **PD CEN/TR 16970:2016** Sustainability of construction works – Guidance for the implementation of EN 15804
- **PD CEN/TR 15941:2010** Sustainability of construction works – Environmental Product Declarations – Methodology for selection and use of generic data.
- **PCR ICMQ-001/15 rev.3.1 del 12/11/2024**
- **EPDItaly Regulation rev.6 (30/10/2023)**
- **Report EPD SIAT rev 3.0 23.05.25**