Type III Environmental Product Declaration No. 864/2025

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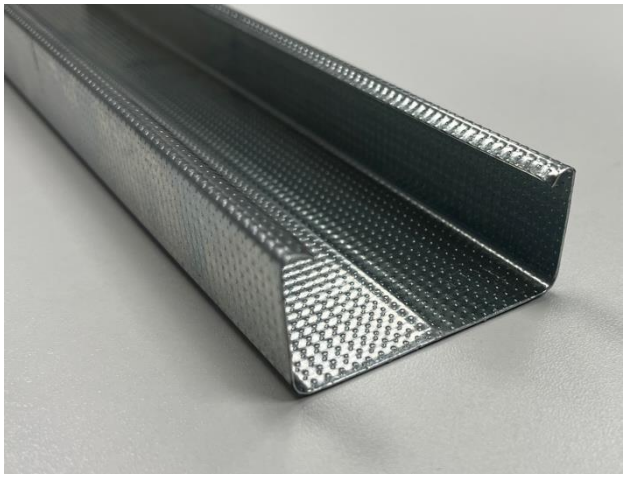
Sheet steel profiles



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Basic information

This declaration is the Type III Environmental Product Declaration (EPD) based on EN 15804+A2 and verified according to ISO 14025 by an external auditor. It contains the information on the impacts of the declared construction materials on the environment and their aspects verified by the independent body according to ISO 14025. Basically, comparison or evaluation of EPD data is possible only if all the compared data were created according to EN 15804+A2.

Life cycle analysis (LCA): A1-A5, C1-C4 and D modules in accordance with EN 15804+A2
(Cradle-to-Gate with options)
Product standards: EN 14195:2014
The year of preparing the EPD: 2025
Service Life: not declared
PCR: ITB-PCR A
Declared unit: 1 ton
Reasons for performing LCA: B2B
Representativeness: Poland, 2023

MANUFACTURER

NEOPROFIL Sp. J. is a manufacturer of steel profiles for the installation of suspended ceilings and partition walls as well as window profiles. Company was founded in April 2008 and headquartered is located in Bielsko-Biała (Poland). Company has two production plants in Ząbkowice Śląskie and in Pińczów. Modern machinery and a qualified workforce guarantee stable, high-quality production. Rapid development, based on the high quality of the products offered and deliveries, has placed Neoprofil in a leading position in the industry of producers of profiles and accessories for drywall construction. The company has extensive contacts both domestically and internationally. NEOPROFIL is present on many markets of the EU countries and beyond and sell to: Germany, Austria, France, Switzerland, Denmark, Hungary, Czech Republic, the Netherlands, Belgium, Slovakia, Croatia, Slovenia. In addition to steel profiles, the offer includes mounting accessories.

Figure 1 Bird's eye view of NEOPROFIL Sp. J. plant in Ząbkowice Śląskie

PRODUCTS DESCRIPTION AND APPLICATION

The assortment covered by this EPD includes almost 100 products that differ in the width of the steel strip and weight. Weight range from 0.265 kg/m to 3.7 kg/m, steel sheet thickness from 0.42 mm to 2.00 mm, depending on the profile geometry, length of products from 1 m – 12 m. Zinc coating in the thickness range from Z100 (100 g/m^2) – up to Z275 (275 g/m^2). Steel type used is DX51D+Z produced by European steel mills, mainly ArcellorMittal. Fire class of steel is A1. Figure 2 shows the main types of drywall profiles produced. Technical information regarding each group of manufactured profiles can be found on the manufacturer's website in the profiles for drywall tab.

CD60	CW50	UA50	Montant 48
UD28	CW55	UA75	Montant 62
UW50	CW60	UA100	Montant 70
UW55	CW70	UA125	Montant 90
UW60	CW75	UA150	Rail 48
UW70	CW100	SP50	Rail 62
UW75	CW125	SP75	Rail 70
UW100	CW150	SP100	Rail 90
UW125	HP60	Lisse	Fourrure 45
UW150	FS60	Cornière 34x23	Fourrure 47

Figure 2 Types of profiles manufactured by NEOPROFIL Sp. J.

LIFE CYCLE ASSESSMENT (LCA) – general rules applied

Unit

The declared unit is 1 ton of galvanized steel profiles for drywall construction.

System boundary

The life cycle analysis (LCA) of the declared products covers: product stage – modules A1-A3, installation modules A4-A5, end of life – modules C1-C4 and benefits and loads beyond the system boundary – module D (cradle-to-gate with options) in accordance with EN 15804+A2 and ITB PCR A . Energy and water consumption, emissions as well as information on generated wastes were inventoried and were included in the calculations. It can be assumed that the total sum of omitted processes does not exceed 5% of all impact categories. In accordance with EN 15804+A2, machines and facilities (capital goods) required for the production as well as transportation of employees were not included in LCA.

Allocation

The allocation rules used for this EPD are based on general ITB's document PCR A. Production of the covered sheet steel profiles is a line process (as presented in Figure 3) conducted in the manufacturing plant located in Ząbkowice Śląskie, Poland. Input and output data from the production is inventoried and allocated to the production on the mass basis. The declaration covers all galvanized steel products manufactured at the plant. Their production resources and processing steps are generally similar, allowing production to be averaged by product weight.

System limits

Minimum 99.0% input materials and 100% energy consumption (electricity, LPG) were inventoried in a processing plant and were included in the calculation. In the assessment, all available data from production have been considered, i.e. all raw materials/elements used as per production process, utilized thermal energy for heating, and electric power consumption. Therefore, unaccounted material and energy flows constitute less than 1% of the mass or energy. It can be assumed that the total sum of neglected processes does not exceed 1 % of energy usage and mass per modules A or D. The packaging products are included. Employee transportation and machinery and equipment necessary for the production process are excluded.

Modules A1 and A2: Raw materials supply and transport

Modules A1 and A2 represent the extraction and processing of raw materials and transport to the production site. Galvanized steel sheet is the main raw material for production of sheet steel profiles. The steel used is produced using BOF technology. Raw materials, additives and packaging come from local suppliers. Module A2 (transport) includes truck transport and uses Polish averages for fuel data.

Module A3: *Production*

The production process takes place in the manufacturing plant located in Ząbkowice Śląskie, Poland. The following processes are used in production: cutting steel sheet into strips of appropriate width, cold rolling the strip to obtain the appropriate geometry, further optional processing involves stamping or drilling mounting holes, and additional cutting of the profiles. After passing quality control, the finished products are packaged and shipped to the customer. A flowchart of the production process is shown in Figure 3.

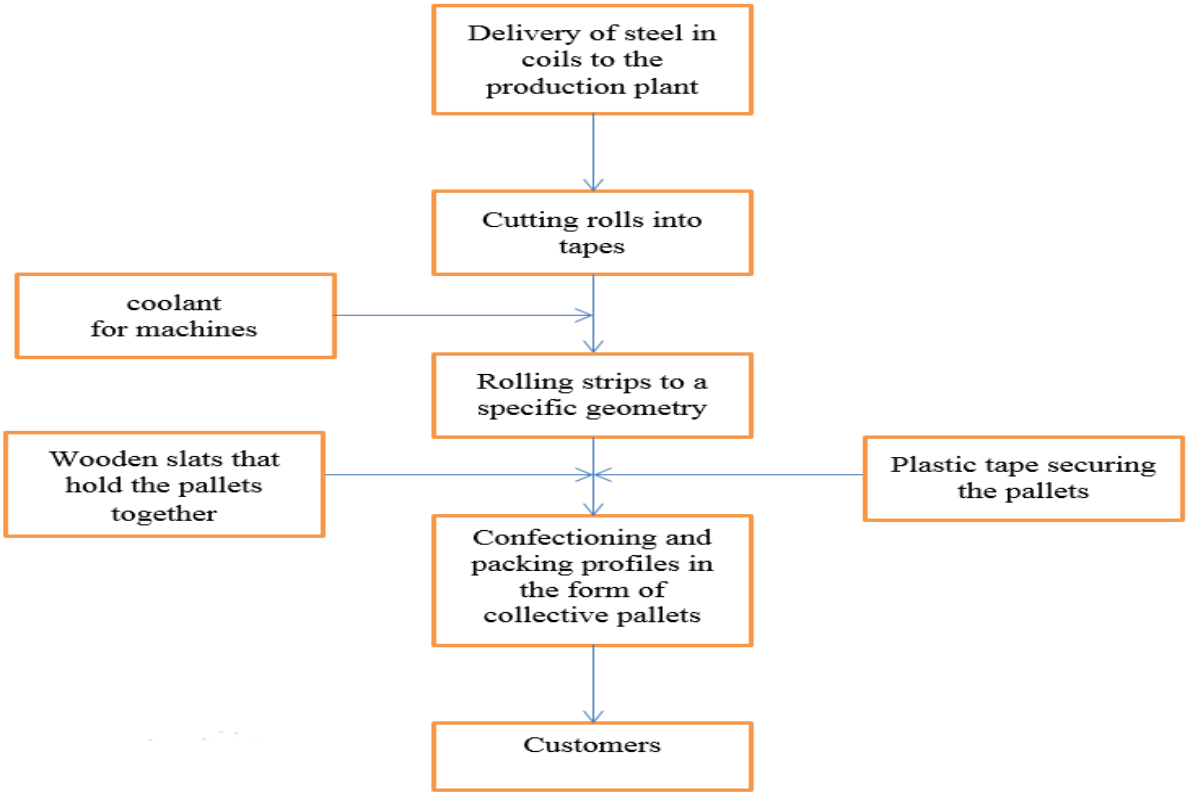

Figure 3. Diagram of the manufacturing process of sheet steel profiles

Module A4-A5: *Transport to consumer and installation*

Transport of the steel structure from the Factory to the construction site is carried out using specialized vehicles. Vehicle transport at distance 100 km is considered (emission standard: Euro 5) with 100% load capacity. It was assumed that 3 kWh of energy per ton is required to install the product.

Modules C and D*: End-of-life (EOL)*

In the adapted end-of-life scenario, based on best practice data, approximately 0.2 MJ/kg is consumed for material recovery using power tools. The de-constructed sheet steel profiles are transported to a steel mill distant by 50 km on > 16t lorry EURO 5 where are used as steel scrap to produce a new steel. The recycling potential of C3 module is 95% and it is assumed that only 5% of the products will end up in a landfill – C4 module (Table 1). Module D presents credits resulting from the recycling of the steel scrap (used for steel production), calculated in accordance with the approach developed by World Steel Association.

Table 1. End-of-life scenario for a sheet steel profiles

Material	Material recovery	Recycling	Landfilling
Steel scrap	100%	95%	5%

Data collection period

The data for manufacture of the declared products refer to period between 01.01.2023 – 31.12.2023 (1 year). The life cycle assessments were prepared for Poland and Europe as reference area.

Data quality

The data selected for LCA originate from ITB-LCI questionnaires completed by NEOPROFIL SP.J. and verified during data audit. No data collected is older than five years and no generic datasets used are older than ten years. The representativeness, completeness, reliability, and consistency is judged as good. The background data for the processes come from the following resources database Ecoinvent v.3.11 and specific suppliers (EPDs). Specific (LCI) data quality analysis was a part of the input data verification.

Assumptions and estimates

The impacts of the representative products were aggregated using weighted average.

Calculation rules

LCA was performed using ITB-LCA tool developed in accordance with EN15804+A2. Emission of greenhouse gases was calculated using the IPCC GWP method with a 100-year horizon. Emission of acidifying substances, emission of substances to water contributing to oxygen depletion, emission of gases that contribute to the creation of ground-level ozone, abiotic depletion, and ozone depletion emissions where all calculated with the EF 3.1. method.

Additional information

Polish electricity (Ecoinvent v 3.11 supplemented by actual national KOBiZE data) emission factor used is 0,597 kg CO_2/kWh (National data for 2023). As a general rule, no particular environmental or health protection measures other than those specified by law are necessary.

LIFE CYCLE ASSESSMENT (LCA) – Results

Declared unit

The declaration refers to declared unit (DU) – 1 ton of sheet steel profiles produced in Poland. The following life cycle modules (Table 2) were included in the analysis. The following tables 3-6 show the environmental impacts of the life cycle of selected modules (A1-A5+C1-C4+D).

Table 2 System boundaries for the environmental characteristic of the product.

Environmental assessment information (MD – Module Declared, MND – Module Not Declared, INA – Indicator Not Assessed)																
Product stage			Construction process		Use stage							End of life				Benefits and loads beyond the system boundary
Raw material supply	Transport	Manufacturing	Transport to construction site	Construction-installation process	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction demolition	Transport	Waste processing	Disposal	Reuse-recovery-recycling potential
A1	**A2**	**A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
MD	**MD**	**MD**	**MND**	**MND**	**MND**	**MND**	**MND**	**MND**	**MND**	**MND**	**MND**	**MD**	**MD**	**MD**	**MD**	**MD**

Table 3 Life cycle assessment (LCA) results of the product – environmental impacts (DU: 1 ton)

Indicator	Unit	A1	A2	A3	A1-A3	A4	A5	C1	C2	C3	C4	D
Global Warming Potential	eq. kg CO_2	2.63E+03	4.91E+01	1.12E+01	2.69E+03	1.67E+01	3.43E+00	3.43E+00	8.34E+00	8.37E+01	2.64E-01	1.77E+00
Greenhouse potential - fossil	eq. kg CO_2	2.65E+03	4.91E+01	1.12E+01	2.71E+03	1.66E+01	3.43E+00	3.43E+00	8.31E+00	6.38E+01	2.63E-01	1.76E+00
Greenhouse potential - biogenic	eq. kg CO_2	-1.98E+01	3.14E-02	1.23E-02	-1.98E+01	5.68E-02	1.00E-04	1.00E-04	2.84E-02	1.98E+01	6.71E-04	3.63E-03
Global warming potential - land use and land use change	eq. kg CO_2	9.87E-01	1.63E-02	1.20E-03	1.00E+00	6.52E-03	1.20E-06	1.20E-06	3.26E-03	1.01E-02	2.49E-04	8.36E-04
Stratospheric ozone depletion potential	eq. kg CFC 11	6.37E-08	1.07E-06	1.09E-07	1.24E-06	3.85E-06	7.00E-11	7.00E-11	1.92E-06	7.80E+02	1.07E-07	1.20E-08
Soil and water acidification potential	eq. mol H+	6.48E+00	1.58E-01	9.60E-02	6.73E+00	6.75E-02	3.80E-05	3.80E-05	3.37E-02	5.32E-01	2.48E-03	7.21E-03
Eutrophication potential - freshwater	eq. kg P	2.38E-03	3.35E-03	1.47E-02	2.04E-02	1.12E-03	6.50E-06	6.50E-06	5.59E-04	4.32E-04	2.45E-05	1.20E-03
Eutrophication potential - seawater	eq. kg N	1.67E+00	5.31E-02	1.27E-02	1.74E+00	2.04E-02	5.50E-06	5.50E-06	1.02E-02	1.81E+00	8.62E-04	1.59E-03
Eutrophication potential - terrestrial	eq. mol N	1.82E+01	5.77E-01	1.09E-01	1.89E+01	2.22E-01	4.65E-05	4.65E-05	1.11E-01	3.42E+00	9.43E-03	1.70E-02
Potential for photochemical ozone synthesis	eq. kg NMVOC	5.86E+00	2.39E-01	3.51E-02	6.13E+00	6.80E-02	1.30E-05	1.30E-05	3.40E-02	7.46E-01	2.74E-03	5.68E-03
Potential for depletion of abiotic resources - non-fossil resources	eq. kg Sb	3.12E-02	1.69E-04	1.11E-05	3.14E-02	5.89E-05	1.67E-08	1.67E-08	2.95E-05	1.45E-05	6.04E-07	1.59E-05
Abiotic depletion potential - fossil fuels	MJ	2.59E+04	6.96E+02	1.82E+02	2.68E+04	2.47E+02	5.80E-02	5.80E-02	1.23E+02	6.05E+01	7.22E+00	1.86E+01
Water deprivation potential	eq. m^3	1.23E+02	3.65E+00	3.40E+00	1.30E+02	1.14E+00	1.20E-03	1.20E-03	5.70E-01	1.42E+00	2.29E-02	5.57E-01

Table 4 Life cycle assessment (LCA) results of the product – additional impacts indicators (DU: 1 ton)

Indicator	Unit	A1-A5	C1-C4	D
Particulate matter	disease incidence	INA	INA	INA
Potential human exposure efficiency relative to U235	eg. kBq U235	INA	INA	INA
Potential comparative toxic unit for ecosystems	CTUe	INA	INA	INA
Potential comparative toxic unit for humans (cancer effects)	CTUh	INA	INA	INA
Potential comparative toxic unit for humans (non-cancer effects)	CTUh	INA	INA	INA
Potential soil quality index	dimensionless	INA	INA	INA

Table 5 Life cycle assessment (LCA) results of the product - the resource use (DU: 1 ton)

Indicator	Unit	A1	A2	A3	A1-A3	A4	A5	C1	C2	C3	C4	D
Consumption of renewable primary energy - excluding renewable primary energy sources used as raw materials	MJ	1.85E+03	1.13E+01	1.63E+01	1.88E+03	3.54E+00	4.30E-03	4.30E-03	1.77E+00	1.11E+00	6.27E-02	2.10E+00
Consumption of renewable primary energy resources used as raw materials	MJ	1.66E+02	0.00E+00	0.00E+00	1.66E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total consumption of renewable primary energy resources	MJ	2.01E+03	1.13E+01	1.63E+01	2.04E+03	3.54E+00	4.30E-03	4.30E-03	1.77E+00	1.11E+00	6.27E-02	2.10E+00
Consumption of non-renewable primary energy - excluding renewable primary energy sources used as raw materials	MJ	2.60E+04	6.96E+02	1.64E+02	2.68E+04	2.47E+02	5.82E-02	5.82E-02	1.23E+02	-2.95E+03	7.22E+00	1.86E+01
Consumption of non-renewable primary energy resources used as raw materials	MJ	4.58E+00	0.00E+00	1.80E+01	2.26E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.01E+03	0.00E+00	0.00E+00
Total consumption of non-renewable primary energy resources	MJ	2.60E+04	6.96E+02	1.82E+02	2.69E+04	2.47E+02	5.82E-02	5.82E-02	1.23E+02	6.06E+01	7.22E+00	1.86E+01
Consumption of secondary materials	kg	6.67E+01	3.11E-01	1.66E-02	6.70E+01	8.27E-02	5.30E-06	5.30E-06	4.14E-02	2.74E-02	1.52E-03	1.61E-01
Consumption of renew. secondary fuels	MJ	2.20E-03	4.08E-03	1.37E-04	6.42E-03	9.11E-04	2.95E-08	2.95E-08	4.56E-04	3.72E-04	3.96E-05	2.01E-04
Consumption of non-renewable secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.70E-05	4.70E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Net consumption of freshwater	m^3	4.74E+00	8.41E-02	8.96E-02	4.91E+00	3.10E-02	1.58E-05	1.58E-05	1.55E-02	5.36E-02	7.90E-03	1.15E-02

Table 6 Life cycle assessment (LCA) results of the product – waste categories (DU: 1 ton)

Indicator	Unit	A1	A2	A3	A1-A3	A4	A5	C1	C2	C3	C4	D
Hazardous waste	kg	1.39E-01	9.97E-01	1.44E+00	2.58E+00	2.77E-01	6.00E-07	6.00E-07	1.38E-01	4.35E-06	7.67E-03	7.57E-01
Non-hazardous waste	kg	6.70E+01	2.14E+01	7.18E+01	1.60E+02	4.92E+00	3.12E-05	3.12E-05	2.46E+00	1.14E+01	1.08E-01	6.30E+00
Radioactive waste	kg	5.33E-01	2.05E-04	1.84E-05	5.33E-01	1.84E-05	4.35E-08	4.35E-08	9.21E-06	3.23E-04	4.79E-05	1.93E-05
Components for re-use	kg	0.00E+00	0.00E+00	2.90E+01	2.90E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	kg	2.14E-03	8.33E-03	8.16E-03	1.86E-02	7.64E-04	6.00E-08	6.00E-08	3.82E-04	4.04E-04	1.44E-05	0.00E+00
Materials for energy recovery	kg	2.53E-06	4.42E-05	1.66E-06	4.84E-05	6.18E-06	5.25E-10	5.25E-10	3.09E-06	5.04E-06	1.71E-07	0.00E+00
Exported Energy	MJ	9.65E-02	3.04E-01	4.66E-02	4.48E-01	0.00E+00	1.73E-04	1.73E-04	0.00E+00	6.17E+01	0.00E+00	0.00E+00

Verification

The process of verification of this EPD is in accordance with ISO 14025 and ISO 21930. After verification, this EPD is valid for a 5-year-period. EPD does not have to be recalculated after 5 years, if the underlying data have not changed significantly.

The basis for LCA analysis was EN 15804+A2 and ITB PCR A
Independent verification corresponding to ISO 14025 (subclause 8.1.3.) ☒ external ☐ internal
External verification of EPD: Halina Prejzner, PhD. Eng. LCI audit and verification: Filip Poznański, M.Sc. Eng. LCA, LCI audit and input data verification: Michał Piasecki, PhD., D.Sc., Eng.

Note 1: The declaration owner has the sole ownership, liability, and responsibility for the information provided and contained in EPD. Declarations of construction products may not be comparable if they do not comply with EN 15804+A2. For further information about comparability, see EN 15804+A2 and ISO 14025.

Note 2: ITB is a public Research Organization and Notified Body (EC Reg. no 1488) to the European Commission and to other Member States of the European Union designated for the tasks concerning the assessment of building products' performance. ITB acts as the independent, third-party verification organization (ISO 17025/17065/17029). ITB-EPD program is recognized and registered member of The European Platform - Association of EPD program operators and ITB-EPD declarations are registered and stored in the international ECO-PORTAL.

Normative references

- ITB PCR A General Product Category Rules for Construction Products
- EN 14195:2014 Metal framing components for gypsum board systems - Definitions, requirements and test methods
- ISO 14025:2006, Environmental labels and declarations – Type III environmental declarations – Principles and procedures
- ISO 21930:2017 Sustainability in buildings and civil engineering works – Core rules for environmental product declarations of construction products and services
- ISO 14044:2006 Environmental management – Life cycle assessment – Requirements and guidelines
- ISO 15686-1:2011 Buildings and constructed assets – Service life planning – Part 1: General principles and framework
- ISO 15686-8:2008 Buildings and constructed assets – Service life planning – Part 8: Reference service life and service-life estimation
- EN 15804:2012+A2:2019 Sustainability of construction works – Environmental product declarations – Core rules for the product category of construction products
- ISO 14067:2018 Greenhouse gases — Carbon footprint of products — Requirements and guidelines for quantification
- PN-EN 15942:2012 Sustainability of construction works – Environmental product declarations – Communication format business-to-business
- ISO 20915:2018 Life cycle inventory calculation methodology for steel products
- KOBiZE Wskaźniki emisyjności CO_2, SO_2, NO_x, CO i pyłu całkowitego dla energii elektrycznej. December 2023
- World Steel Association 2017 Life Cycle inventory methodology report for steel products
- https://ecoinvent.org/

LCA, LCI audit and input data verification
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CERTIFICATE № 864/2025
of TYPE III ENVIRONMENTAL DECLARATION

Products:

Sheet steel profiles

Manufacturer:

NEOPROFIL SP.J.

Gen. Boruty-Spiechowicza 68, Bielsko Biała, Poland

confirms the correctness of the data included in the development of
Type III Environmental Declaration and accordance with the requirements of the standard

EN 15804+A2

Sustainability of construction works.
Environmental product declarations.
Core rules for the product category of construction products.

This certificate, issued on 28th November 2025 is valid for 5 years
or until amendment of mentioned Environmental Declaration

Head of the Thermal Physic, Acoustics and Environment Department
Agnieszka Winkler-Skalna, PhD

INSTYTUT TECHNIKI BUDOWLANEJ

Deputy Director for Research and Innovation
Krzysztof Kuczyński, PhD

Warsaw, November 2025