Environmental Product Declaration Type III ITB No. 122

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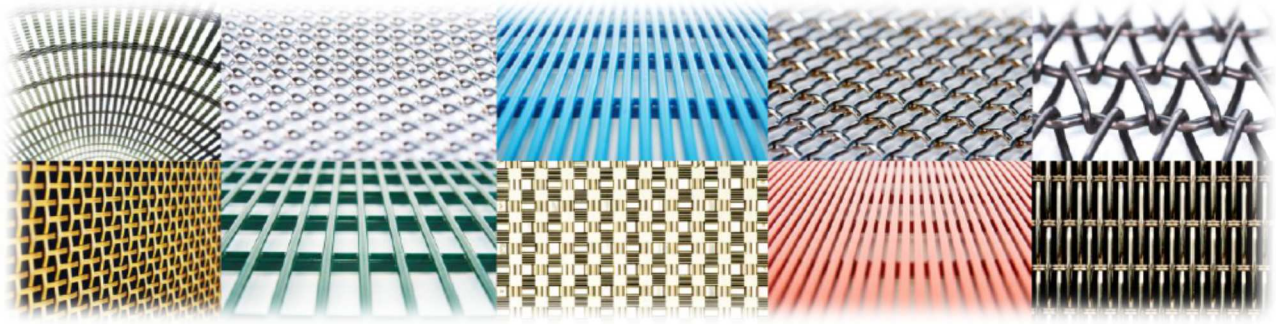
Progress Eco Sp. z o.o. sp.k.

Progress woven wire meshes and welded grids



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ITB is the verified member of The European Platform for EPD program operators and LCA practitioner www.eco-platform.org

Basic information

This declaration is the type III Environmental Product Declaration (EPD) based on EN 15804:2012+A2:2019 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. Their aspects were verified by the independent body according to ISO 14025. Basically, a comparison or evaluation of EPD data is possible only if all the compared data were created according to EN 15804:2012+A2:2019 (see point 5.3 of the standard).

Life cycle analysis (LCA): A1-A3, C1-C4 and D modules in accordance with EN 15804:2012+A2:2019 (Cradle to Gate with options)

The year of preparing the EPD: 2020

Product standards:

Service Life: 50 years

PCR: ITB-PCR A (PCR based on EN 15804)

Declared unit: 1 kg of Progress woven wire meshes and welded grids

Reasons for performing LCA: B2B

Representativeness: Polish production, year 2019

MANUFACTURER AND PRODUCTS DESCRIPTION

Progress has for more than 20 years designed and manufactured steel wire meshes and grides. Manufacturing Plant is located in Tuczępy, Poland. Steel meshes and grids are produced in a technological process presented in Figure 1. Manufacturer offers a wide range of solutions in stainless, acid-proof and heat-resistant steels as well as special steels. The high-quality steel grades used for their manufacturing and a wide range of openings and wire diameters guarantee their effective work in any processing. Woven wire and wedge screens constitute a basic type of steel screens. Progress production includes wire screens with square and rectangular meshes, available in single-crimp and double-crimp version. Transverse and longitudinal wires are in contact with each other at the crimp, thereby creating the meshes.

Base materials (input to a product system) are as follows: carbon steel, stainless steel, acid resistant steel, heat resistant steel, non-ferrous metals, cantal; standard AISI 304 (0H18N9, 1.4301), AISI 321 (1H18N9T, 1.4541), AISI 316 (0H17N12M2T, 1.4401).

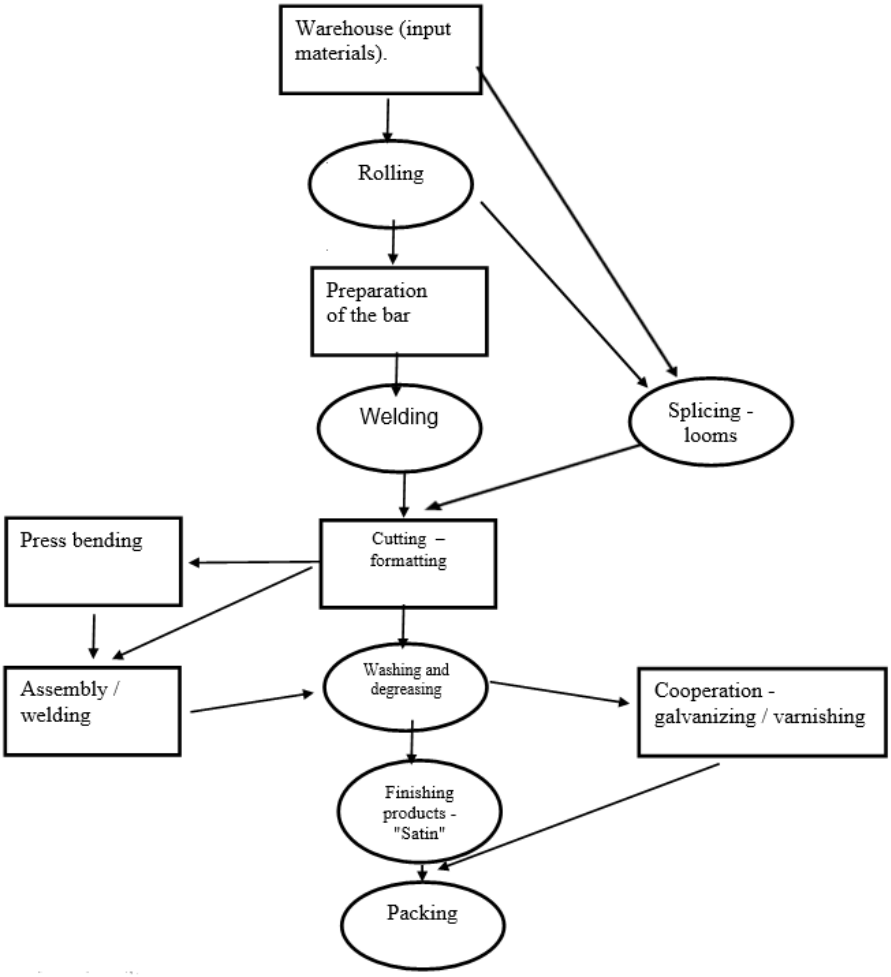


Figure 1. A scheme of manufacturing process of the Progress Screens products (steel grids and meshes)

Progress Woven Wire Meshes are made of: AISI 304 stainless steel, AISI 316, carbon steel, galvanized, Pro-Zinal and other. Max dimensions: 4,000 x 120,000 mm. Finish: Etching, passivation, electropolishing, cataphoresis, powder coating according to RAL, anodizing. They are used as indoor and external building applications, also as covers for large facade, elevation and wall surfaces. Various patterns of interlaces and design variants allow for almost unlimited possibilities (Figure 2).

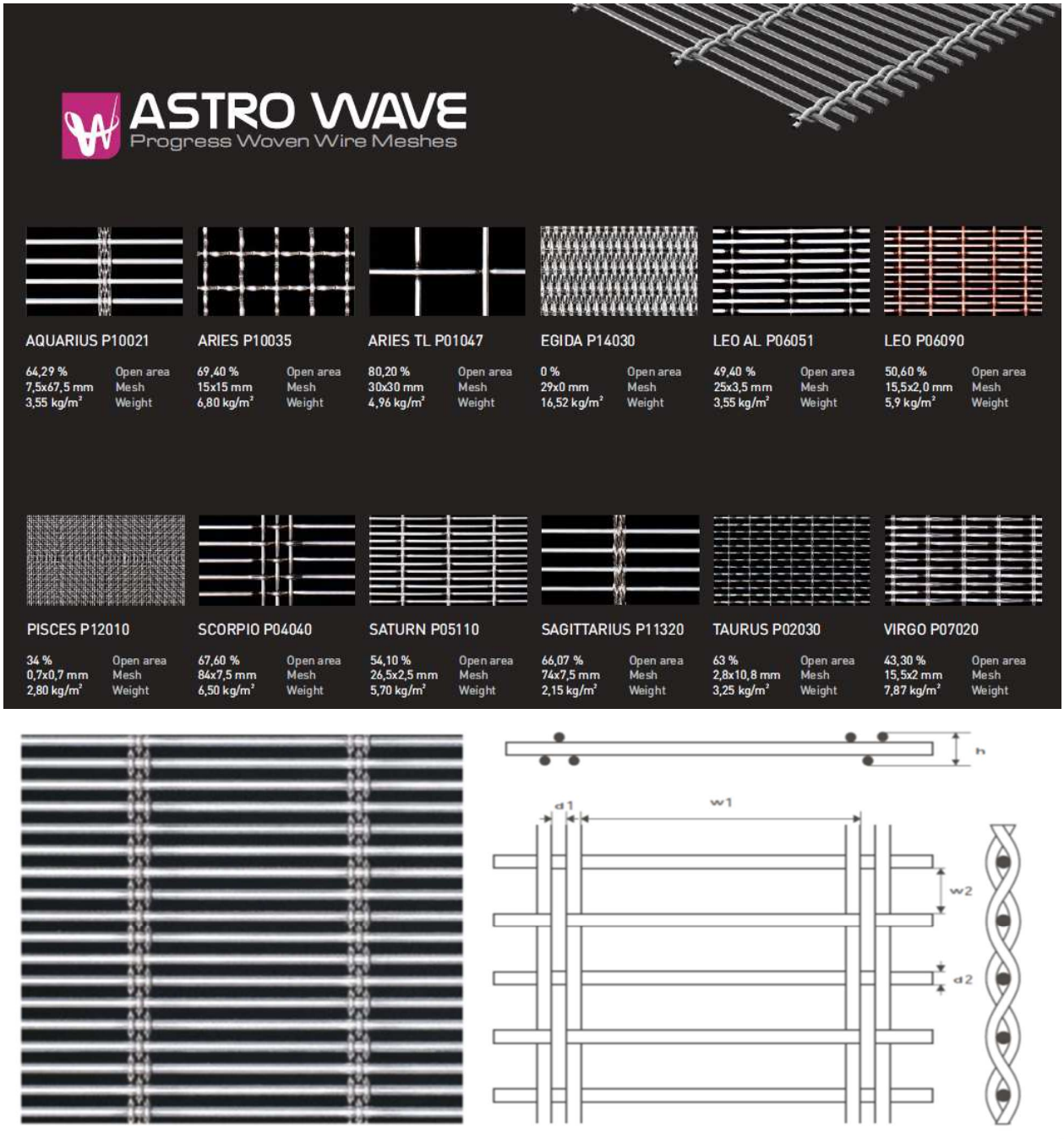
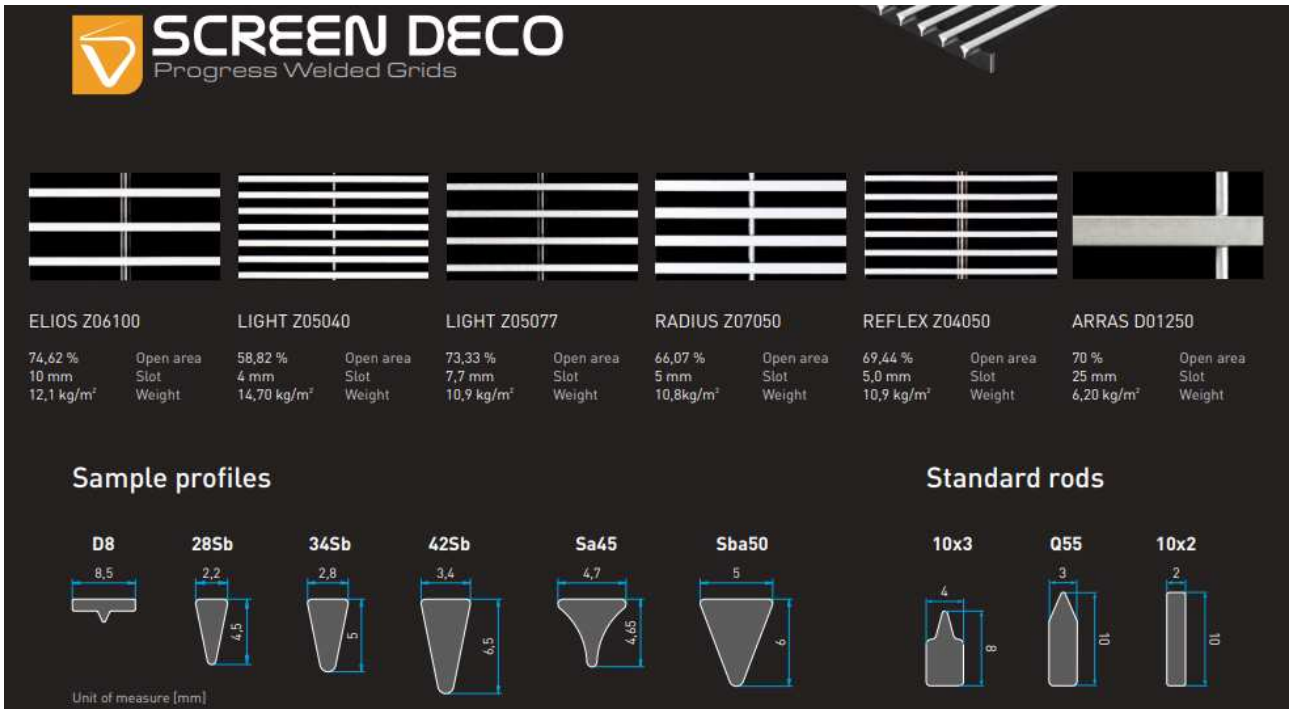


Figure. 2. Progress Woven Wire Meshes – basic technical overview

Progress Welded Grids are made of: AISI 304 stainless steel, AISI 316, carbon steel, galvanized, Pro-ZINAL®, Aluminium. Finish: Etching, passivation, electropolishing, cataphoresis, powder coating according to the RAL palette, shot peening, galvanizing. Max dimensions: 1400 x3800 mm, 6000 x1600 mm.



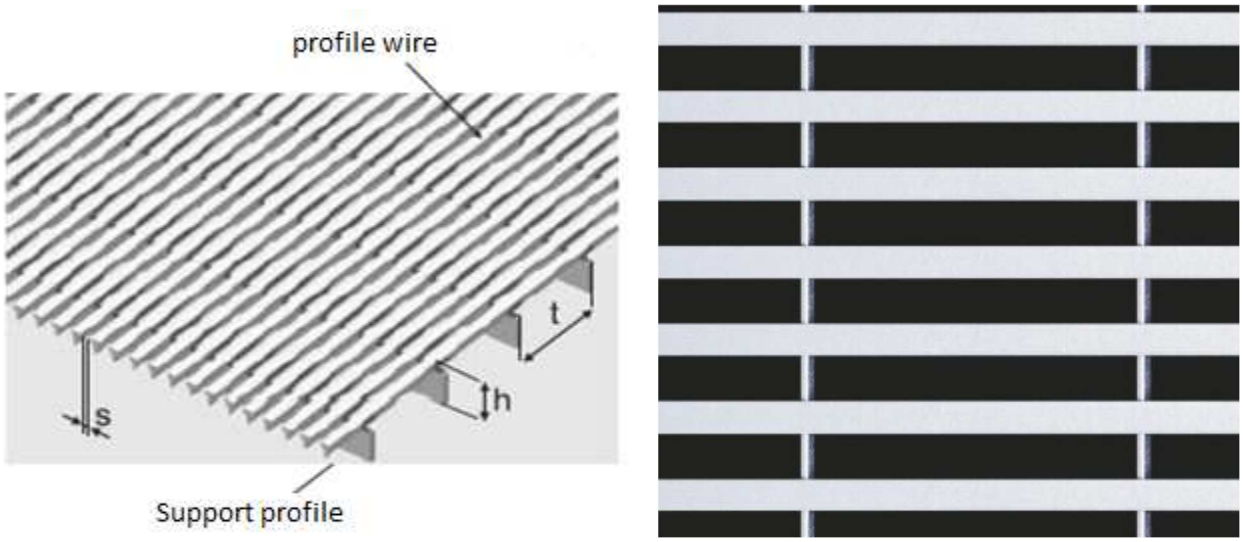


Figure 2. Progress Welded Grids – basic technical overview

Technical data on Progress Wire products can be found at http://progressarch.co.uk/downloads/catalogues

LIFE CYCLE ASSESSMENT (LCA) – general rules applied

Unit

The declared unit is 1 kg of **Progress steel mesh and grid**. However, this EPD declaration also provides conversion per 1 m^2 unit (see table 4 and 5).

System boundary

The life cycle analysis of the declared products covers “Product Stage” A1-A3, and End of Life stage C1, C2, C3, C4 and gains beyond system in D module (Cradle to Gate with options) accordance with EN 15804:2012+A2:2019 and ITB PCR A.

Allocation

The allocation rules used for this EPD are based on general ITB PCR A. Production of the Progress Products is a line process in one manufacturing plant located at Tuczępy, Poland. Allocation of impact is done on product mass basis (8,2 % of whole production). All impacts from raw materials extraction are allocated in A1 module of the LCA (not included 0,5% of secondary production inputs). 99% of impacts from a line production were allocated to product covered by this declaration. Utilization of packaging material was not taken into consideration. Module A2 includes transport of raw materials such as steel profile wires from their suppliers to manufacturing plant. Municipal wastes of factory were allocated to module A3. Energy supply was inventoried for whole factory and 8,2% was allocated to the product assessed. Emissions in the factory are assessed using national KOBIZE emission factors for energy carriers and electricity and were allocated to module A3.

System limits

99,5% materials and 99,9% energy consumption was inventoried in factory and were included in calculation. In the assessment, all significant parameters from gathered production data are considered, i.e. all material used per formulation, utilized thermal energy, internal fuel and electric power consumption, direct production waste, and available emission measurements. It is assumed that the total sum of omitted processes does not exceed 1% of all impact categories. In accordance with EN 15804:2012+A2:2019, machines and facilities (capital goods) required for and during production are excluded, as is transportation of employees.

A1 and A2 Modules: Raw materials supply and transport

Raw materials come mainly from suppliers providing environmental data on a steel production. Data on transport of the different input products to the manufacturing plants were inventoried in detail and modelled by assessor. Means of transport include trucks. For calculation purposes Polish and European fuel averages are applied.

A3: Production

The production process is presented in Fig. 1.

End of life scenarios (C module)

It is assumed in phase C1 that products are removed manually (without additional environmental impacts). It is assumed that at the end of life the transport distance from the product deconstruction place to waste processing (C2) is 10 km on > 16 t loaded lorry with 75% capacity utilization and fuel consumption of 35 l per 100 km. Materials recovered from dismantled products are recycled and landfilled according to the Polish treatment practice of industrial waste what is presented in Table 1.

The reuse, recovery and recycling potential for a new product system is considered beyond the system boundaries (module D) based on World Steel recommendations and national practice.

Table 1. End of life scenarios for Progress Screens

Progress products	Material recovery	Recycling	Landfilling	Reuse
Steel screens	95%	45%	5%	50%

Data collection period

The data for manufacture of the declared products refer to period between 01.01.2019 – 31.12.2019 (1 year). The life cycle assessments were prepared for Poland as reference area.

Data quality - production

The values determined to calculate A3 originate from verified Progress LCI inventory data. A1 values were prepared considering several specific EPDs for the european made steel products. Allocation for steel production impacts is done in accordance to *LCI data for Steel products Report* compiled by Braian Hughes and William Hare (2012 for World Steel Association).

Assumptions and estimates

The impacts of the representative products were aggregated using weighted average. Data regarding production per 1 m^2 were averaged for the analyzed production.

Calculation rules

LCA was done in accordance with ITB PCR A document.

Databases

The background data for the processes come from the following databases: Ecoinvent v.3.5, specific EPDs, ÖKOBAUDAT, KOBIZE and Tauron (Polish electricity mix and combustion factors for fules). Specific data quality analysis was a part of external audit. Characterization factors are CML ver. 4.2 based. ITB-LCA algorithms were used for impact calculations. The time related quality of the data used is valid (5 years).

LIFE CYCLE ASSESSMENT (LCA) – Results

Declared unit

The declaration refers to the unit FU– 1 kg of the Progress product (grid and meshes).

Table 2. System boundaries (modules included) in a product environmental assessment

Environmental assessment information (MA – Module assessed, MNA – Module not assessed, 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
MA	MA	MA	MNA	MNA	MNA	MNA	MNA	MNA	MNA	MNA	MNA	MA	MA	MA	MA	MA

Table 3. Environmental product characteristic – 1 kg of steel Progress product

Environmental impacts: (FU) 1 kg of steel Progress Screen									
Indicator	**Unit**	**A1**	**A2**	**A3**	**C1**	**C2**	**C3**	**C4**	**D**
Global warming potential	kg CO_2 eq.	9,33E-01	1,03E-01	1,93E-01	0,00E+00	5,74E-02	2,57E-03	2,70E-03	-9,04E-01
Depletion potential of the stratospheric ozone layer	kg CFC 11 eq.	6,60E-07	0,00E+00	1,20E-09	0,00E+00	0,00E+00	3,42E-09	5,50E-10	-5,36E-07
Acidification potential of soil and water	kg SO_2 eq.	3,78E-03	7,91E-04	1,16E-04	0,00E+00	7,54E-03	2,14E-04	2,50E-05	-3,52E-03
Formation potential of tropospheric ozone	kg Ethene eq.	1,55E-03	5,24E-05	4,32E-04	0,00E+00	5,50E-04	5,46E-07	5,50E-07	-1,50E-03
Eutrophication potential	kg $(PO_4)^{3-}$ eq.	3,59E-04	1,40E-04	8,80E-05	0,00E+00	1,33E-03	3,42E-04	4,00E-05	-4,05E-04
Abiotic depletion potential (ADP-elements) for non-fossil resources	kg Sb eq.	1,22E-03	0,00E+00	7,16E-07	0,00E+00	0,00E+00	2,61E-09	6,23E-09	-9,91E-04
Abiotic depletion potential (ADP-fossil fuels) for fossil resources	MJ	1,40E+01	2,14E+00	6,85E+00	0,00E+00	7,95E-01	3,42E-01	5,20E-02	-1,59E+01
Environmental aspects: (FU) 1 kg of steel Progress Screen									
Indicator	**Unit**	**A1**	**A2**	**A3**	**C1**	**C2**	**C3**	**C4**	**D**
Use of renewable primary energy excluding renewable primary energy resources used as raw materials	MJ	6,51E-01	1,50E-01	3,79E-01	0,00E+00	5,56E-02	5,13E-02	7,80E-03	-2,22E+00
Use of renewable primary energy resources used as raw materials	MJ	INA	INA	INA	INA	INA	INA	INA	INA
Total use of renewable primary energy resources (primary energy and primary energy resources used as raw materials)	MJ	6,51E-01	1,50E-01	3,79E-01	0,00E+00	5,56E-02	4,28E-03	2,66E-04	-7,92E-01
Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials	MJ	INA	INA	INA	INA	INA	INA	INA	INA
Use of non-renewable primary energy resources used as raw materials	MJ	INA	INA	INA	INA	INA	INA	INA	INA
Total use of non-renewable primary energy resources (primary energy and primary energy resources used as raw materials)	MJ	1,61E+01	2,25E+00	7,32E+00	0,00E+00	8,35E-01	3,63E-01	5,50E-02	-1,79E+01
Use of secondary material	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Use of renewable secondary fuels	MJ	1,40E+00	1,13E-01	0,00E+00	0,00E+00	4,17E-02	0,00E+00	0,00E+00	-1,19E+00
Use of non-renewable secondary fuels	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Net use of fresh water	m^3	1,76E-05	1,00E-06	3,08E-03	0,00E+00	7,55E-03	0,00E+00	0,00E+00	-7,00E-03
Other environmental information describing waste categories: (FU) 1 kg of steel Progress Screen									
Indicator	**Unit**	**A1**	**A2**	**A3**	**C1**	**C2**	**C3**	**C4**	**D**
Hazardous waste disposed	kg	1,50E-05	4,60E-06	0,00E+00	0,00E+00	2,53E-08	6,41E-08	2,44E-08	-1,44E-05
Non-hazardous waste disposed	kg	8,62E-01	4,27E-03	2,16E-02	0,00E+00	2,35E-05	2,79E-05	5,01E-02	-7,11E-01
Radioactive waste disposed	kg	2,48E-06	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,63E-07	8,22E-08	-2,01E-06
Components for re-use	kg	0,00E+00	0,00E+00	7,13E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	-3,57E-02
Materials for recycling	kg	0,00E+00	0,00E+00	1,55E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	-7,74E-01
Materials for energy recover	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

Table 4. Environmental product characteristic – 1 m^2 of Progress woven wire mesh (averaged)

Environmental impacts: (FU) 1 tonne of woven wire mesh									
Indicator	**Unit**	**A1**	**A2**	**A3**	**C1**	**C2**	**C3**	**C4**	**D**
Global warming potential	kg CO_2 eq.	4,66E+00	5,15E-01	9,67E-01	0,00E+00	2,87E-01	1,28E-02	1,35E-02	-4,52E+00
Depletion potential of the stratospheric ozone layer	kg CFC 11 eq.	3,30E-06	0,00E+00	6,00E-09	0,00E+00	0,00E+00	1,71E-08	2,75E-09	-2,68E-06
Acidification potential of soil and water	kg SO_2 eq.	1,89E-02	3,95E-03	5,78E-04	0,00E+00	3,77E-02	1,07E-03	1,25E-04	-1,76E-02
Formation potential of tropospheric ozone	kg Ethene eq.	7,77E-03	2,62E-04	2,16E-03	0,00E+00	2,75E-03	2,73E-06	2,75E-06	-7,51E-03
Eutrophication potential	kg $(PO_4)^{3-}$ eq.	1,79E-03	6,99E-04	4,40E-04	0,00E+00	6,65E-03	1,71E-03	2,00E-04	-2,02E-03
Abiotic depletion potential (ADP-elements) for non-fossil resources	kg Sb eq.	6,12E-03	0,00E+00	3,58E-06	0,00E+00	0,00E+00	1,31E-08	3,11E-08	-4,96E-03
Abiotic depletion potential (ADP-fossil fuels) for fossil resources	MJ	7,02E+01	1,07E+01	3,42E+01	0,00E+00	3,97E+00	1,71E+00	2,60E-01	-7,93E+01
Environmental aspects: (FU) 1 tonne of woven wire mesh									
Indicator	**Unit**	**A1**	**A2**	**A3**	**C1**	**C2**	**C3**	**C4**	**D**
Use of renewable primary energy excluding renewable primary energy resources used as raw materials	MJ	INA	INA	INA	INA	INA	INA	INA	INA
Use of renewable primary energy resources used as raw materials	MJ	INA	INA	INA	INA	INA	INA	INA	INA
Total use of renewable primary energy resources (primary energy and primary energy resources used as raw materials)	MJ	3,26E+00	7,50E-01	1,90E+00	0,00E+00	2,78E-01	2,14E-02	1,33E-03	-3,96E+00
Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials	MJ	INA	INA	INA	INA	INA	INA	INA	INA
Use of non-renewable primary energy resources used as raw materials	MJ	INA	INA	INA	INA	INA	INA	INA	INA
Total use of non-renewable primary energy resources (primary energy and primary energy resources used as raw materials)	MJ	8,07E+01	1,13E+01	3,66E+01	0,00E+00	4,17E+00	1,82E+00	2,75E-01	-8,93E+01
Use of secondary material	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Use of renewable secondary fuels	MJ	7,00E+00	5,63E-01	0,00E+00	0,00E+00	2,09E-01	0,00E+00	0,00E+00	-5,95E+00
Use of non-renewable secondary fuels	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Net use of fresh water	m^3	8,79E-05	5,00E-06	1,54E-02	0,00E+00	3,78E-02	0,00E+00	0,00E+00	-3,50E-02
Other environmental information describing waste categories: (FU) 1 tonne of woven wire mesh									
Indicator	**Unit**	**A1**	**A2**	**A3**	**C1**	**C2**	**C3**	**C4**	**D**
Hazardous waste disposed	kg	7,49E-05	2,30E-05	0,00E+00	0,00E+00	1,27E-07	3,21E-07	1,22E-07	-7,22E-05
Non-hazardous waste disposed	kg	4,31E+00	2,13E-02	1,08E-01	0,00E+00	1,18E-04	1,39E-04	2,51E-01	-3,56E+00
Radioactive waste disposed	kg	1,24E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,17E-07	4,11E-07	-1,00E-05
Components for re-use	kg	0,00E+00	0,00E+00	3,57E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	-1,78E-01
Materials for recycling	kg	0,00E+00	0,00E+00	7,74E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	-3,87E+00
Materials for energy recover	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

Table 5. Environmental product characteristic – 1 m^2 of Progress wedge grid (averaged)

Environmental impacts: (FU) 1 m^2 of wedge grid									
Indicator	**Unit**	**A1**	**A2**	**A3**	**C1**	**C2**	**C3**	**C4**	**D**
Global warming potential	kg CO_2 eq.	9,33E+00	1,03E+00	1,93E+00	0,00E+00	5,74E-01	2,57E-02	2,70E-02	-9,04E+00
Depletion potential of the stratospheric ozone layer	kg CFC 11 eq.	6,60E-06	0,00E+00	1,20E-08	0,00E+00	0,00E+00	3,42E-08	5,50E-09	-5,36E-06
Acidification potential of soil and water	kg SO_2 eq.	3,78E-02	7,91E-03	1,16E-03	0,00E+00	7,54E-02	2,14E-03	2,50E-04	-3,52E-02
Formation potential of tropospheric ozone	kg Ethene eq.	1,55E-03	5,24E-04	4,32E-03	0,00E+00	5,50E-03	5,46E-06	5,50E-06	-1,50E-02
Eutrophication potential	kg $(PO_4)^{3-}$ eq.	3,59E-03	1,40E-03	8,80E-04	0,00E+00	1,33E-02	3,42E-03	4,00E-04	-4,05E-03
Abiotic depletion potential (ADP-elements) for non-fossil resources	kg Sb eq.	1,22E-02	0,00E+00	7,16E-06	0,00E+00	0,00E+00	2,61E-08	6,23E-08	-9,91E-03
Abiotic depletion potential (ADP-fossil fuels) for fossil resources	MJ	1,40E+02	2,14E+01	6,85E+01	0,00E+00	7,95E+00	3,42E+00	5,20E-01	-1,59E+02
Environmental aspects: (FU) 1 m^2 of wedge grid									
Indicator	**Unit**	**A1**	**A2**	**A3**	**C1**	**C2**	**C3**	**C4**	**D**
Use of renewable primary energy excluding renewable primary energy resources used as raw materials	MJ	INA	INA	INA	INA	INA	INA	INA	INA
Use of renewable primary energy resources used as raw materials	MJ	INA	INA	INA	INA	INA	INA	INA	INA
Total use of renewable primary energy resources (primary energy and primary energy resources used as raw materials)	MJ	6,51E+00	1,50E+00	3,79E+00	0,00E+00	5,56E-01	4,28E-02	2,66E-03	-7,92E+00
Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials	MJ	INA	INA	INA	INA	INA	INA	INA	INA
Use of non-renewable primary energy resources used as raw materials	MJ	INA	INA	INA	INA	INA	INA	INA	INA
Total use of non-renewable primary energy resources (primary energy and primary energy resources used as raw materials)	MJ	1,61E+02	2,25E+01	7,32E+01	0,00E+00	8,35E+00	3,63E+00	5,50E-01	-1,79E+02
Use of secondary material	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Use of renewable secondary fuels	MJ	1,40E+01	1,13E+00	0,00E+00	0,00E+00	4,17E-01	0,00E+00	0,00E+00	-1,19E+01
Use of non-renewable secondary fuels	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Net use of fresh water	m^3	1,76E-04	1,00E-05	3,08E-02	0,00E+00	7,55E-02	0,00E+00	0,00E+00	-7,00E-02
Other environmental information describing waste categories: (FU) 1 m^2 of of wedge grid									
Indicator	**Unit**	**A1**	**A2**	**A3**	**C1**	**C2**	**C3**	**C4**	**D**
Hazardous waste disposed	kg	1,50E-04	4,60E-05	0,00E+00	0,00E+00	2,53E-07	6,41E-07	2,44E-07	-1,44E-04
Non-hazardous waste disposed	kg	8,62E+00	4,27E-02	2,16E-01	0,00E+00	2,35E-04	2,79E-04	5,01E-01	-7,11E+00
Radioactive waste disposed	kg	2,48E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,63E-06	8,22E-07	-2,01E-05
Components for re-use	kg	0,00E+00	0,00E+00	7,13E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	-3,57E-01
Materials for recycling	kg	0,00E+00	0,00E+00	1,55E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	-7,74E+00
Materials for energy recover	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

RESULTS INTERPRETATION

Interpretation of the results has been carried out considering the methodology, data-related assumptions and any limitations declared in the EPD.
The environmental impact of Progress product (cradle to gate with options) is largely dependent on the energy-intensive production of high-grade steel on which the manufacturer has only a little influence. The impact of the production line largely depends on the amount of electricity and gas consumed by manufacturing plant. There are no significant emissions or environmental impacts in the A3 production processes alone. Interrogation of the LCA results show that the cradle-to-gate A1-A3 GWP (Global Warming Potential) impact of 1 kg of screen products is 1.23 kgCO_2e. For GWP, A1-A3 (production stage) accounts for 95% of the lifecycle impact. Manufacturing process for GWP (A3) in comparison to whole life is only 15%. The production of high-quality steel as input metrial (module A1) therefore has the greatest impact on the environmental characteristic. The LCA results show that the cradle-to gate primary energy demand of fossil fuels by the declared unit is 23 MJ while A1 steel production alone consumes 14 MJ of fossil fuel energy. The transport of raw materials from considerable distances is also significant, which in the A2 module gives as much as 2.1 MJ per 1 kg of product. The Progress products, due to the high potential for reuse and the potential for significant reuse for steel production, has significant environmental gains - module D, which is its biggest benefit in the entire life cycle.

VERIFICATION

The process of verification of this EPD was 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 15804:2012+A2:2019 and ITB PCR A
Independent verification corresponding to ISO 14025 (subclause 8.1.3.) ☒ external ☐ internal
External verification of EPD: Ph.D. Eng. Halina Prejzner LCA, LCI audit and input data verification: Ph.D. Eng. Michał Piasecki, m.piasecki@itb.pl Verification of LCA: Ph.D. Eng. Justyna Tomaszewska, j.tomaszewska@itb.pl

Normative references

- ITB PCR A General Product Category Rules for Construction Products
- 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
- LCI DATA FOR STEEL PRODUCTS at https://www.worldsteel.org/en/dam/jcr:04f8a180-1406-4f5c-93ca-70f1ba7de5d4/LCI%2520study_2018%2520data%2520release.pdf

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CERTIFICATE № 122/2020
of TYPE III ENVIRONMENTAL DECLARATION

Product:

Progress woven wire meshes and welded grids

Manufacturer:

Progress Eco Sp. z o.o. sp.k.
Dobrów 7, 28-142 Tuczępy, Poland

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

PN-EN 15804+A2

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

This certificate, issued for the first time on 30th June 2020 is valid for 5 years
or until amendment of mentioned Environmental Declaration

Deputy 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, June 2020