

Environmental Product Declaration Type III ITB No. 331/2022

Issuance date: 7.06.2022
Validity date: 7.06.2027



XIO 2.0

DESKS, WORKBENCHES

BASIC INFORMATION

This declaration is the type III Environmental Product Declaration (EPD) based on ISO 14040 and ITB-PCR A. It contains the information on the impacts of the declared product on the environment. Their aspects were verified by the independent body according to ISO 14025.

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

Life cycle analysis (LCA):

A1-A3, C1-C4 and D modules in accordance with ISO 14040 and ITB-PCR A (Cradle to Gate with options)

The year of preparing the EPD:
2022

Product standard:

EN 527-1, EN 527-2, EK5/AK3 methodology

Service Life:

5 years for standard product with possibility of 10 years

PCR:

ITB-PCR A (PCR v. 1.5 based on EN 15804+A2)

Declared unit:

desk/workbench

Reasons for performing LCA:

B2B

Representativeness:

Polish product

Owner of the EPD:

Nowy Styl sp. z o.o.

Address: Pużaka 49, 38-400 Krosno, Poland

Website: <https://pl.nowystyl.com/pl/>

Contact: info@nowystyl.com

Tel.: +48 13 43 76 100,

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EPD Program Operator:

Instytut Techniki Budowlanej (ITB)

Address: Filtrowa 1, 00-611 Warsaw, Poland

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01/MANUFACTURER

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OUR COMPANY

Nowy Styl has been helping companies around the world to arrange office and public spaces for 30 years. First we define their needs, and then we choose and provide products and solutions that will make the work healthier, more efficient and comfortable. We do it with genuine passion and satisfaction, what has led us to the position of a company in Europe, with sales revenues of over 380 million euro per year.

We present our solutions at the Office Inspiration Centre and 31 showrooms in London, Paris, Düsseldorf, Munich, Prague, Bratislava, Dubai and many more. We provide furniture for new office buildings, conference centres, cinemas, stadiums, music, sports and multi-functional facilities.

Our list of references includes multinational corporations such as Siemens, Toyota, DS Smith, Honeywell, Deloitte and ABB, cultural institutions such as Polish National Radio Symphony Orchestra in Katowice and the Opera in Munich, as well as the stadiums in Poland and France in which European Football Championships were held in 2012 and 2016. Fans of the Football World Cup in Qatar in six out of seven stadiums now under construction for the event will also sit in our seats.

We cooperate with designers from all over the world and our products are appreciated in competitions. We have received, i. a., the Red Dot Design Award, the German Design Award, the Iconic Awards, the Design Award.

The Nowy Styl portfolio includes the following brands: Nowy Styl, Kusch+Co, Forum by Nowy Styl, SOHOS by Nowy Styl and Sitag by Nowy Styl.

We make our products in more than a dozen manufacturing plants equipped with cutting-edge technologies, located in Poland, Germany, France, Switzerland, Ukraine and Turkey. This assessment applies to those located in Poland, in the region of Podkarpacie (4 plants) - 3 in Jasło and 1 in Rzepedź, with a floor area of nearly 100,000 m², including a fully automated office furniture factory opened in 2014. The company also owns Research and Development Centre located in Jasło where innovative production technologies and product solutions are constantly developed.

01/MANUFACTURER

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As an extension of the existing environmental management system in Nowy Styl sp. z o.o., we have implemented an ecodesign management system based on the ISO 14006 standard (Environmental Management Systems - Guidelines for incorporating ecodesign). Ecodesign management is a methodical approach, taking into account environmental aspects during product design and development in order to reduce the negative environmental impact throughout the product's life cycle according to ISO 14040 standard (including components and raw materials).

Carbon footprint reduction

Nowy Styl has implemented a CO2 management system for the Organization (CO2 footprint) in accordance with the requirements stated in ISO 14064-1 and the GHG Protocol and confirmed by the CO2 Performance Ladder certificate. Many initiatives completed in 2019-2020 produced impressive results - in 2020 our emissions in Scope 1 and 2 were lower by 26% than in 2018. One of key measures we undertake is providing renewable energy for our production processes: in 2020 it was 12,76% in total energy used for manufacturing and offices, and in 2021 - 32,51%.

EcoVadis Platinum medal

EcoVadis is an independent, holistic CSR assessment rating several dozen criteria in four thematic categories: human and labour rights, environment, ethics and sustainable procurement. Nowy Styl undergoes these audits for many years now. In 2022 our company achieved the highest possible rating and was awarded the EcoVadis Platinum Medal, what places us among the top 1% of the best-rated companies.

Sustainable procurement

Risk analysis and supplier assessment is the responsibility of Supplier Quality Department (within Global Procurement Department) in Poland. The purpose of their analysis is to constantly monitor and supervise our current and future suppliers with regards to potential risks.

Supplier evaluation is focused among others on the following areas: Employees human rights, Fair business practices, Environment, OHS, Purchasing, Production Process, Maintenance, Continuous Improvement and other (in accordance to FEMB Level guidance manual). Suppliers from high-risk countries shall obligatory provide 3rd party audit report.

Since 2022 we prepare to expand our carbon footprint analysis for Scope 3. Our suppliers are asked to provide this information in the self-assessment.



Environmental standards

We are aware that our operations have an impact on the natural environment, and we strive to reduce or neutralise it with future generations in mind.

Nowy Styl has implemented management systems confirmed by the following certificates: quality management system EN ISO 9001:2015, environmental management system EN ISO 14001:2015 and occupational health and safety EN ISO 45001.

02/PRODUCT DESCRIPTION

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XIO 2.0 DESKS

TABLE TOP TYPES:
fixed or sliding

TABLE TOP SHAPES:
rectangular

TABLE TOP FINISH TYPES:
Melamine - melamine faced chipboard,
thickness 25mm
Laminate - chipboard covered with laminate,
thickness 25mm
Veneer - chipboard covered with veneer,
thickness 25mm
Fenix NTM - chipboard covered with Fenix NTM laminate,
thickness 25mm

BASE TYPES:
T-Legs - square or rectangular columns made of steel
C-legs - square or rectangular columns made of steel
Foot Types: 30° angle, 90° angle or 120° angle
Height adjustment types: manual or electric
Finish options: Powder coating



02/PRODUCT DESCRIPTION

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XIO 2.0 WORKBENCHES



TABLE TOP TYPES:
fixed or sliding

TABLE TOP SHAPES:
rectangular

TABLE TOP FINISH TYPES:
Melamine - melamine faced chipboard, thickness 25mm
Laminate - chipboard covered with laminate, thickness 25mm
Veneer - chipboard covered with veneer, thickness 25mm
Fenix NTM - chipboard covered with Fenix NTM laminate, thickness 25mm

BASE TYPES:
H-Legs - square or rectangular columns made of steel
Height adjustment types: manual or electric
Finish options: Powder coating

CERTIFICATES:
GS Mark for selected configurations

APPLICATION:
Office Workstations

GENERAL RULES APPLIED

ALLOCATION

The allocation rules used for this EPD are based on general ITB-PCR A v. 1.5. Production of the desks and workbenches Xio 2.0 is a line process carried out in four factories of Nowy Styl sp. z o.o. located in Krosno and Rzepedź (Poland). Allocation was done on product mass basis. All impacts from raw materials extraction are allocated in A1 module of the LCA. 100% of impacts from the line production of Nowy Styl sp. z o.o. were inventoried and 0.1% Xio 2.0 were allocated to 0.1% Xio 2.0 production. Utilization of packaging material was taken into consideration. Module A2 includes transport of raw materials such as wood-faced boards, wood, polymer components, steel elements, papers, additives, ancillary materials and packaging materials from their suppliers to Nowy Styl sp. z o.o. in Jasło and in Rzepedź. Municipal wastes of factory were allocated to module A3. Energy supply was inventoried for whole factory and was allocated to the of the desks and workbenches Xio 2.0 production. Emissions in the factory are measured and were allocated to module A3.

The green energy purchased by Nowy Styl sp. z o.o. in 2020 was not included in the LCA calculation.

SYSTEM LIMITS

The life cycle analysis of the declared products covers "Product Stage", A1-A3, C1, C2, C3, C4 and D modules (Cradle-to-Gate with options) accordance with ISO 14040 and PCR A v.1.5. The details of systems limits are provided in product technical report. 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 ITB PCR A v. 1.5., machines and facilities (capital goods) required for the production as well as transportation of employees were not included in LCA.

A1 AND A2 MODULES: RAW MATERIALS SUPPLY AND TRANSPORT

Wood-faced boards, wood, polymer components, steel elements, papers, additives, ancillary materials and packaging materials come from Polish and foreign suppliers. Means of transport include lorries. European standards for average combustion were used for calculations.

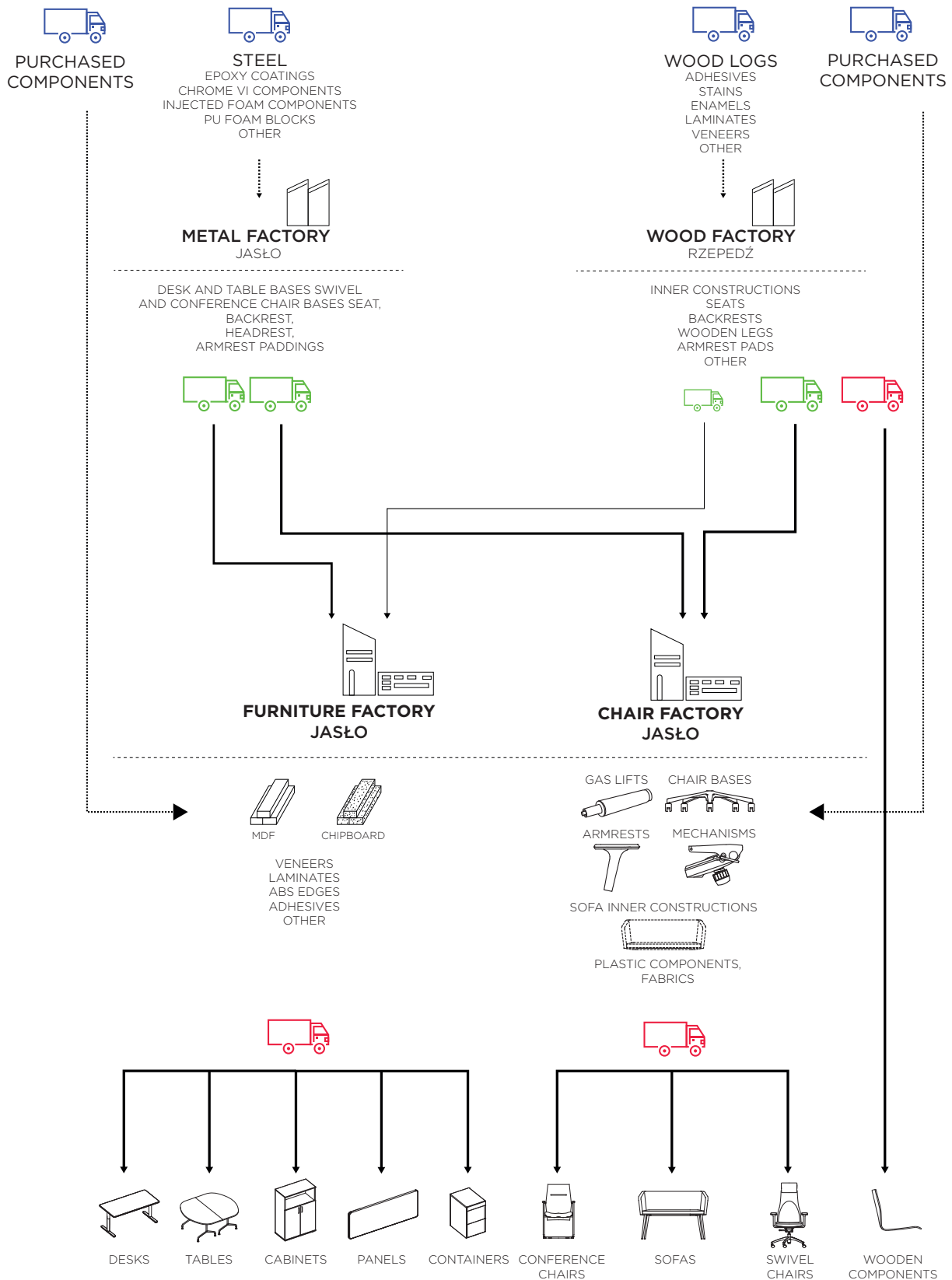
A3 PRODUCTION

As shown in the scheme of manufacturing on page 7 Nowy Styl sp. z o.o. manufactures products in four factories in Poland. Two of them process purchased materials such as metal and wood into components. Then, the furniture and chair factories use those components, as well as purchased components to assemble products, which are then ready for distribution. Some of the components made in the wood factory are also sold as finished products.

03/LIFE CYCLE ASSESSMENT (LCA)

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A3 PRODUCTION



LEGEND:



PURCHASED COMPONENTS



PRODUCED COMPONENTS



SOLD PRODUCTS

03/LIFE CYCLE ASSESSMENT (LCA)

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GENERAL RULES APPLIED

END OF LIFE SCENARIOS

It is assumed that at the end-of-life, the declared product is dismantled manually or with the use of electrical tools. The resulting waste is transported to waste processing plant distant by 75 km on 24t lorry (Euro 5) with 90% capacity utilization (module C2). Selectively recovered materials undergo recycling, energy recovery or landfilling according to national treatment practice of the industrial waste and recommendations of Nowy Styl sp. z o.o. Environmental burdens declared in module C4 are associated with waste-specific emissions to air and groundwater. A potential credit resulting from the recycling and energy recovery are presented in module D.

Table 1 End of life scenario for Xio 2.0 desks and workbenches.

MATERIAL	MATERIAL RECOVERY	ENERGY RECOVERY	RECYCLING	LANDFILLING
POLYMERS	100%	10%	85%	5%
ALUMINIUM	100%	0%	98%	2%
STEEL	100%	0%	98%	2%
WOOD AND WOODEN-BASED COMPONENTS	100%	8%	90%	2%
CARTONBOARD	100%	20%	80%	0%

DATA COLLECTION PERIOD

Primary data provided by Nowy Styl sp. z o.o. covers a period of 01.01.2020 – 31.12.2020 (1 year). The life cycle assessments were prepared for Poland and Europe as reference area.

DATA QUALITY

The data selected for LCA analysis originate from ITB-LCI questionnaires completed by Nowy Styl sp. z o.o. using the inventory data, ITB and Ecoinvent databases. No specific data collected is older than five years and no generic datasets used are older than ten years. The representativeness, completeness, reliability, and consistency are judged as good.

ASSUMPTIONS AND ESTIMATES

The impacts of the representative the desks and workbenches Xio 2.0 were aggregated using weighted average. Impacts were inventoried and calculated for all products of the desks and workbenches Xio 2.0

CALCULATION RULES

LCA was done in accordance with ITB PCR A v. 1.5 using ITB LCA-tool.

DATA BASES

The data for the processes come from the following databases: Ecoinvent v.3.8, specific EPDs, ITB-Data. specific data quality analysis was a part of the external audit.

03/LIFE CYCLE ASSESSMENT (LCA)

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RESULTS

DECLARED UNIT

The declaration refers to declared unit (DU): 1 desk / workbench Xio 2.0 produced by Nowy Styl sp. z o.o.

Table 2. System boundaries for the environmental characteristic of the Xio 2.0 desk / workbench produced by Nowy Styl sp. z o.o.

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	MNA	MNA	MNA	MNA	MNA	MNA	MNA	MNA	MNA	MD	MD	MD	MD	MD

Environmental assessment information

(MNA - Module not assessed, MD - Module Declared, INA - Indicator Not Assessed)

03/LIFE CYCLE ASSESSMENT (LCA)

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RESULTS

Xio 2.0					
Environmental impacts: (DU) 1 desk/workbench (weight: 83,90 kg*)					
IMPACT CATEGORIES	UNIT	A1	A2	A3	A1-A3
Global Warming Potential	eq. kg CO ₂	4,32E+01	2,28E-01	1,13E+01	5,48E+01
Greenhouse gas potential - fossil	eq. kg CO ₂	1,05E+02	2,27E-01	1,11E+01	1,16E+02
Greenhouse gas potential - biogenic	eq. kg CO ₂	-6,34E+01	1,13E-03	1,71E-01	-6,33E+01
Global warming potential - land use and land use change	eq. kg CO ₂	2,18E+00	1,33E-04	2,29E-03	2,18E+00
Stratospheric ozone depletion potential	eq. kg CFC 11	5,25E-06	4,97E-08	3,47E-07	5,64E-06
Soil and water acidification potential	eq. mol H+	5,28E-01	8,87E-04	9,55E-02	6,24E-01
Eutrophication potential - freshwater	eq. kg P	4,19E-02	2,17E-05	1,61E-02	5,80E-02
Eutrophication potential - seawater	eq. kg N	1,09E-01	2,45E-04	1,37E-02	1,23E-01
Eutrophication potential - terrestrial	eq. mol N	9,94E-01	2,67E-03	1,18E-01	1,11E+00
Potential for photochemical ozone synthesis	eq. kg NMVOC	3,78E-01	8,33E-04	3,38E-02	4,12E-01
Potential for depletion of abiotic resources - non-fossil resources	eq. kg Sb	1,03E-03	1,40E-06	1,40E-05	1,04E-03
Abiotic depletion potential - fossil fuels	MJ	1,44E+03	3,32E+00	1,68E+02	1,61E+03
Water deprivation potential	eq. m ³	6,36E+01	2,03E-02	2,95E+00	6,65E+01
Environmental impacts: (DU) 1 desk/workbench (weight: 83,90 kg*)					
ASPECTS	Unit	A1	A2	A3	A1-A3
Consumption of renewable primary energy - excluding renewable primary energy sources used as raw materials	MJ	INA	INA	INA	INA
Consumption of renewable primary energy resources used as raw materials	MJ	INA	INA	INA	INA
"Total consumption of renewable primary energy resources (primary energy AND primary energy resources used as raw materials)"	MJ	1,10E+03	7,02E-02	1,05E+01	1,11E+03
"Consumption of non-renewable primary energy, excluding non-renewable primary energy resources used as raw materials"	MJ	INA	INA	INA	INA
Consumption of non-renewable primary energy resources used as raw materials	MJ	INA	INA	INA	INA
"Total consumption of non-renewable primary energy resources (primary energy and primary energy resources used as raw materials)"	MJ	1,47E+03	3,32E+00	1,79E+02	1,66E+03
Consumption of secondary materials	kg	1,41E+01	1,71E-03	0,00E+00	1,41E+01
Consumption of renewable secondary fuels	MJ	2,77E+01	2,04E-05	0,00E+00	2,77E+01
Consumption of non-renewable secondary fuels	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Net consumption of freshwater resources	m ³	9,11E-01	5,40E-04	1,01E-01	1,01E+00
Environmental impacts: (DU) 1 desk/workbench (weight: 83,90 kg*)					
WASTES	Unit	A1	A2	A3	A1-A3
Hazardous waste, neutralized	kg	5,05E+00	5,17E-03	3,08E-01	5,36E+00
Non-hazardous waste, neutralized	kg	9,40E+01	9,52E-02	1,06E+00	9,52E+01
Radioactive waste	kg	6,62E-03	2,23E-05	1,33E-04	6,78E-03
Components for re-use	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for recycling	kg	1,28E-02	1,32E-05	4,47E+00	4,49E+00
Materials for energy recovery	kg	3,67E-05	1,02E-07	0,00E+00	3,68E-05
Energy exported	MJ	3,25E+00	4,59E-03	0,00E+00	3,26E+00

*Product weight includes: material, packaging waste and all packaging materials

03/LIFE CYCLE ASSESSMENT (LCA)

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RESULTS

XIO 2.0						
Environmental impacts: (DU) 1 desk/workbench (weight: 83,90 kg*)						
IMPACT CATEGORIES	UNIT	C1	C2	C3	C4	D
Global Warming Potential	eq. kg CO ₂	4,97E-02	2,25E-03	4,74E+00	2,34E-02	-3,71E+01
Greenhouse gas potential - fossil	eq. kg CO ₂	4,88E-02	2,24E-03	3,99E+00	2,34E-02	-3,98E+01
Greenhouse gas potential - biogenic	eq. kg CO ₂	8,80E-04	7,66E-06	7,52E-01	7,56E-05	3,23E+00
Global warming potential - land use and land use change	eq. kg CO ₂	1,15E-05	8,80E-07	2,75E-04	7,31E-06	-5,21E-01
Stratospheric ozone depletion potential	eq. kg CFC 11	8,75E-10	5,19E-10	5,50E-07	3,54E-09	-2,81E-06
Soil and water acidification potential	eq. mol H+	4,84E-04	9,10E-06	1,33E-02	8,59E-05	-1,47E-01
Eutrophication potential - freshwater	eq. kg P	8,29E-05	1,51E-07	1,19E-04	1,22E-06	-2,87E-02
Eutrophication potential - seawater	eq. kg N	6,88E-05	2,75E-06	5,21E-03	7,44E-05	-2,24E-02
Eutrophication potential - terrestrial	eq. mol N	5,90E-04	3,00E-05	5,67E-02	3,23E-04	-2,34E-01
Potential for photochemical ozone synthesis	eq. kg NMVOC	1,66E-04	9,18E-06	1,60E-02	9,68E-05	-8,39E-02
Potential for depletion of abiotic resources - non-fossil resources	eq. kg Sb	6,59E-08	7,95E-09	1,50E-06	2,23E-08	6,55E-04
Abiotic depletion potential - fossil fuels	MJ	7,45E-01	3,33E-02	3,47E+01	2,49E-01	-7,62E+02
Water deprivation potential	eq. m ³	1,51E-02	1,54E-04	1,68E-01	1,17E-03	-6,14E+01
Environmental impacts: (DU) 1 desk/workbench (weight: 83,90 kg*)						
ASPECTS	Unit	C1	C2	C3	C4	D
Consumption of renewable primary energy - excluding renewable primary energy sources used as raw materials	MJ	INA	INA	INA	INA	INA
Consumption of renewable primary energy resources used as raw materials	MJ	INA	INA	INA	INA	INA
"Total consumption of renewable primary energy resources (primary energy AND primary energy resources used as raw materials)"	MJ	5,41E-02	4,77E-04	2,10E-01	4,93E-03	-3,32E+02
"Consumption of non-renewable primary energy, excluding non-renewable primary energy resources used as raw materials"	MJ	INA	INA	INA	INA	INA
Consumption of non-renewable primary energy resources used as raw materials	MJ	INA	INA	INA	INA	INA
"Total consumption of non-renewable primary energy resources (primary energy and primary energy resources used as raw materials)"	MJ	7,89E-01	3,33E-02	3,75E+01	2,49E-01	-8,11E+02
Consumption of secondary materials	kg	0,00E+00	1,12E-05	4,69E-04	5,64E-05	1,79E+01
Consumption of renewable secondary fuels	MJ	0,00E+00	1,23E-07	7,13E-06	3,38E-03	4,62E+01
Consumption of non-renewable secondary fuels	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,83E+00
Net consumption of freshwater resources	m ³	2,42E-04	4,19E-06	1,93E-03	2,78E-04	-7,38E-01
Environmental impacts: (DU) 1 desk/workbench (weight: 83,90 kg*)						
WASTES	Unit	C1	C2	C3	C4	D
Hazardous waste, neutralized	kg	1,54E-07	3,73E-05	5,12E-02	9,02E-04	-2,64E-01
Non-hazardous waste, neutralised	kg	4,40E-03	6,63E-04	1,59E+00	1,51E-01	-1,77E+00
Radioactive waste	kg	6,38E-07	2,48E-09	2,43E-04	1,59E-06	-4,57E-04
Components for re-use	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for recycling	kg	0,00E+00	1,03E-07	1,11E-02	5,21E-07	1,78E+01
Materials for energy recovery	kg	0,00E+00	8,33E-10	2,36E-08	2,01E-08	-1,85E-06
Energy exported	MJ	0,00E+00	0,00E+00	4,23E+00	2,42E-04	2,65E+00

*Product weight includes: material, packaging waste and all packaging materials

04/VERIFICATION

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The process of verification of this EPD is in accordance with ISO 14025. 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 ISO 14040 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. Justyna Tomaszewska, j.tomaszewska@itb.pl

Verification of LCA:
PhD., DSc., Eng. Michał Piasecki, m.piasecki@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 14040:2006 Environmental management – Life cycle assessment – Principles and framework
- >> ISO 14044:2006 Environmental management – Life cycle assessment – Requirements and guidelines
- >> EN 15804:2012+A2:2019 Sustainability of construction works – Environmental product declarations – Core rules for the product category of construction products
- >> PN-EN 15942:2012 Sustainability of construction works – Environmental product declarations – Communication format business-to-business
- >> KOBiZE Wskaźniki emisyjności CO₂, SO₂, NO_x, CO i pyłu całkowitego dla energii elektrycznej, grudzień 2021 r.

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