Type III Environmental Product Declaration No. 294/2022

Issuance date: 07.02.2022
Validity date: 07.02.2027

STEEL STRUCTURES

with zinc and paint coatings

Owner of the EPD:

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Basic information

This declaration is the Type III Environmental Product Declaration (EPD) based on EN 15804 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 (see point 5.3 of the standard).

Life cycle analysis (LCA): A1-A4, C1-C4 and D modules in accordance with EN 15804 (Cradle-to-Gate with options)

The year of preparing the EPD: 2022

Product standard: PN-EN 1090

Service Life: 50 years for standard product

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

Declared unit: 1 ton

Reasons for performing LCA: B2B

Representativeness: Polish, European

MANUFACTURER

KOBEX specialises in design and prefabrication of steel structures, in particular large-surface steel buildings and roof shelters. We are a Polish company with Polish capital and staff. Our products meet the European standards. They are assembled on site and present in many locations, also outside the country. All our products are subject to strict quality control to make sure that the buildings we make will be serviceable for decades.

Fig. 1. KOBEX Sp. z o.o. manufacturing plant located in Kamień (Poland).

PRODUCT DESCRIPTION AND APPLICATION

Steel (metal) structures are construction objects in which the main load-bearing elements transferring loads to the foundation are smaller elements or their larger groups made of steel.

Steel structures manufactured by KOBEX are primarily steel structures in the form of bar skeletons - the most popular are used for the construction of low and high steel halls, single and multi-bay steel halls, in which individual elements (support columns, roof transoms and other structural elements) can be lattice or full wall.

Equally popular for erecting various types of buildings, including those with a large transverse span, as an internal lattice or frame skeleton for erecting roof structures (covering) of buildings whose walls are made in the traditional technology of brick or reinforced concrete poured.

The structures are also used for the erection of various types of industrial structures, e.g. flyovers, frame and truss structures, e.g. supporting structures for pipelines, industrial installations, towers or masts, etc.

The main product of KOBEX are mainly steel structures of the halls. They are usually welded constructions, protected against corrosion with paint or zinc. The manufactured halls can have many applications and can be used in almost every field of industry. The most popular are warehouse, production, agricultural and logistic halls. More details can be found on the website https://kobexstal.pl/en/oferta-en/.

LIFE CYCLE ASSESSMENT (LCA) – general rules applied

Allocation

The allocation rules used for this LCA are based on general ITB PCR A and product mass basis. Production of the steel structures is a line process performed in KOBEX Sp. z o. o manufacturing site located in Kamień (Poland) while the zinc coating (hot-dip galvanization) and paint coating are outsourced to local companies. All impacts from raw materials extraction and processing are allocated in module A1 of the LCA. Impacts from the global line production of KOBEX Sp. z o.o. were inventoried and 100% were allocated to the steel structures production. Water and energy consumption, associated emissions and generated wastes are allocated to module A3. Burdens accompanying processes of zinc and paint coatings were modeled using specific, localized data and were allocated in modules A1 and A3. Utilization of packaging material was taken into consideration. Module A2 includes transport of raw materials from their suppliers to KOBEX Sp. z o.o. in Kamień.

System limits

The life cycle analysis (LCA) of the declared products covers: product stage – modules A1-A3, transport to a construction site – module A4, 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+A1 and ITB PCR A. The details of systems limits are provided in the background 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 EN 15804+A1, machines and facilities (capital goods) required for the production as well as transportation of employees were not included in LCA.

Modules A1 and A2: *Raw materials supply and transport*

Steel profiles, additives, ancillary materials (paints, solvents, welding materials) and packaging materials (wood, paper, foil) come from both local and foreign suppliers. Module A2 is based on information on deliveries inventoried by KOBEX Sp. z o. o. Means of transport include to lorries with load: <10t, 10 – 16t and >16 t. For calculation purposes Polish and European fuel averages are applied.

Module A3: *Production*

Each structure manufactured by KOBEX is made of prefabricated materials which consist of various types of steel profiles and sheets. The general scheme of the process is presented below.

Profiles and sheets are delivered to the production plant from external suppliers. The production process consists in appropriate cutting and making holes in the profiles using a saw, a saw-drill or a CO_2 laser and a fiber laser. At the same time, sheets are cut from larger forms. Cutting is carried out mechanically, or by burning with plasma or laser - all depending on the thickness of the sheet and the degree of complexity of a given detail. After all the components of a given construction detail have been cut out, all the elements are connected with each other in an appropriate manner by

welding. The last stage of production is painting the structure or transferring it to a specialized galvanizing plant in order to protect it against corrosion. The structure prepared in this way is transferred to the construction site where the assembly takes place.

Module A4: *Transport to construction site*

The steel structures with zinc and paint coatings produced by KOBEX Sp. z o. o. are shipped to local as well as foreign construction sites. An average distance of 500 km between KOBEX Sp. z o. o. and construction sites was assumed for calculation purposes. Means of transport include lorries with capacity load >16t (loading factor of 85%) and fuel consumption of 35 L per 100 km.

Modules *C1-C4 and D: End-of-life (EoL)*

At the end-of-life the steel structures are deconstructed with the use of heavy machineries (C1). The resulting steel scrap travels a distance of 75 km on lorry > 16t with 85% capacity utilization and fuel consumption of 35 L per 100 km (module C2) to steel mill where 98% undergo shredding (module C3) and the remaining 2% is forwarded to a landfill in the form of mixed construction and demolition wastes (module C4). Potential credits resulting from the recycling of the recovered steel scrap are presented in module D.

Data quality

The data selected for LCA analysis originate from ITB-LCI questionnaires completed by KOBEX 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.

Data collection period

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

Assumptions and estimates

The impacts of the representative steel structures with zinc and paint coatings were aggregated using weighted average. Impacts were inventoried and calculated for all steel structures.

Calculation rules

LCA was done in accordance with ITB PCR A document.

Databases

The data for the processes come from the following databases: Ecoinvent v.3.8 (additives, ancillary materials and packaging materials), specific EPDs of the steel products, ITB-Database (zinc and paint coating).

LIFE CYCLE ASSESSMENT (LCA) – Results

Declared unit

The declaration refers to declared unit (DU) – 1 ton of the steel structures with zinc and paint coating produced by KOBEX Sp. z o.o.

Table 1. System boundaries for the environmental characteristic of the steel structures.

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	MD	MND	MND	MND	MND	MND	MND	MND	MND	MD	MD	MD	MD	MD

List of abbreviations:

GWP – Global warming potential;
ODP – Depletion potential of the stratospheric ozone layer;
AP – Acidification potential of land and water;
EP – Eutrophication potential;
POCP – Formation potential of tropospheric ozone photochemical oxidants;
ADPE – Abiotic depletion potential for non-fossil resources;
ADPF – Abiotic depletion potential for fossil resources;
PERE – Use of renewable primary energy excluding renewable primary energy resources used as raw materials;
PERM – Use of renewable primary energy resources used as raw materials;
PERT – Total use of renewable primary energy resources;
PENRE – Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials;
PENRM – Use of non-renewable primary energy resources used as raw materials;
PENRT – Total use of non-renewable primary energy resources;
SM – Use of secondary material;
RSF – Use of renewable secondary fuels;
NRSF – Use of non-renewable secondary fuels;
FW – Use of net fresh water;
HWD – Hazardous waste disposed; NHWD – Non-hazardous waste disposed;
RWD – Radioactive waste disposed;
CRU – Components for re-use;
MFR – Materials for recycling;
MER – Materials for energy recovery;
EE – Exported energy.

Table 2. Life cycle assessment (LCA) results of the steel structures with zinc coating produced by KOBEX Sp. z o. o.

Environmental impacts: (DU) 1 ton										
Indicator	**Unit**	**A1**	**A2**	**A3**	**A4**	**C1**	**C2**	**C3**	**C4**	**D**
GWP	kg CO_2 eq.	1.54E+03	9.82E+00	3.16E+02	2.32E+01	3.49E+01	3.48E+00	1.82E+01	1.03E-01	-5.39E+02
ODP	kg CFC 11 eq.	1.33E-05	0.00E+00	2.48E-07	0.00E+00	5.92E-06	0.00E+00	3.08E-06	3.37E-08	3.17E-07
AP	kg SO_2 eq.	5.99E+00	1.11E-01	2.68E-01	2.77E-01	1.58E-01	4.16E-02	8.77E-02	7.48E-04	-1.88E+00
POCP	kg Ethene eq.	6.53E-01	7.82E-03	1.35E+00	2.02E-02	8.03E-03	3.03E-03	4.76E-03	3.14E-05	-2.85E-01
EP	kg $(PO_4)^{3-}$ eq.	7.63E-01	1.97E-02	3.35E-02	4.89E-02	3.66E-02	7.34E-03	2.04E-02	1.61E-04	-1.51E-01
ADPE	kg Sb eq.	2.17E+00	0.00E+00	1.17E-03	0.00E+00	1.80E-05	0.00E+00	9.37E-06	2.40E-07	-1.47E-04
ADPF	MJ	1.62E+04	1.34E+02	3.20E+03	3.16E+02	4.67E+02	4.74E+01	2.43E+02	2.86E+00	-5.04E+03
Environmental aspects on resource use: (DU) 1 ton										
Indicator	**Unit**	**A1**	**A2**	**A3**	**A4**	**C1**	**C2**	**C3**	**C4**	**D**
PERE	MJ	INA	INA	INA	INA	INA	INA	INA	INA	INA
PERM	MJ	INA	INA	INA	INA	INA	INA	INA	INA	INA
PERT	MJ	2.50E+03	9.37E+00	1.86E+02	7.44E-02	2.71E+00	1.12E-02	1.41E+00	2.56E-02	1.22E+02
PENRE	MJ	INA	INA	INA	INA	INA	INA	INA	INA	INA
PENRM	MJ	INA	INA	INA	INA	INA	INA	INA	INA	INA
PENRT	MJ	1.83E+04	1.41E+02	3.36E+03	3.32E+02	5.06E+02	4.98E+01	2.64E+02	3.10E+00	-5.08E+03
SM	kg	8.40E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.21E+02
RSF	MJ	3.02E-01	7.03E+00	0.00E+00	1.66E+01	0.00E+00	2.49E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	MJ	1.23E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	m^3	1.21E+03	6.54E-05	1.18E-01	7.72E-06	8.45E-03	1.16E-06	4.40E-03	1.15E-04	-3.76E+02
Other environmental information describing waste categories: (DU) 1 ton										
Indicator	**Unit**	**A1**	**A2**	**A3**	**A4**	**C1**	**C2**	**C3**	**C4**	**D**
HWD	kg	3.29E-01	4.54E-10	9.43E-01	1.07E-09	1.31E-03	1.61E-10	6.84E-04	4.45E-06	-3.73E-05
NHWD	kg	6.60E+01	2.03E-07	7.12E+00	4.79E-07	6.41E-01	7.18E-08	3.33E-01	2.00E+01	5.77E+00
RWD	kg	1.71E-01	1.17E-09	0.00E+00	2.77E-09	3.31E-03	4.15E-10	1.72E-03	1.93E-05	3.73E-02
CRU	kg	6.49E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MFR	kg	1.46E+01	0.00E+00	8.12E+01	0.00E+00	0.00E+00	0.00E+00	9.80E+02	0.00E+00	0.00E+00
MER	kg	1.34E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EE	MJ per energy carrier	0.00E+00	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 3. Life cycle assessment (LCA) results of the steel structures with paint coating produced by KOBEX Sp. z o. o.

Environmental impacts: (DU) 1 ton										
Indicator	**Unit**	**A1**	**A2**	**A3**	**A4**	**C1**	**C2**	**C3**	**C4**	**D**
GWP	kg CO_2 eq.	1.51E+03	9.82E+00	2.97E+02	2.32E+01	3.49E+01	3.48E+00	1.82E+01	1.03E-01	-5.39E+02
ODP	kg CFC 11 eq.	1.07E-05	0.00E+00	2.48E-07	0.00E+00	5.92E-06	0.00E+00	3.08E-06	3.37E-08	3.17E-07
AP	kg SO_2 eq.	5.72E+00	1.11E-01	2.95E-01	2.77E-01	1.58E-01	4.16E-02	8.77E-02	7.48E-04	-1.88E+00
POCP	kg Ethene eq.	6.60E-01	7.82E-03	5.71E+00	2.02E-02	8.03E-03	3.03E-03	4.76E-03	3.14E-05	-2.85E-01
EP	kg $(PO_4)^{3-}$ eq.	7.82E-01	1.97E-02	3.05E-02	4.89E-02	3.66E-02	7.34E-03	2.04E-02	1.61E-04	-1.51E-01
ADPE	kg Sb eq.	6.40E-03	0.00E+00	1.10E-03	0.00E+00	1.80E-05	0.00E+00	9.37E-06	2.40E-07	-1.47E-04
ADPF	MJ	1.57E+04	1.34E+02	2.95E+03	3.16E+02	4.67E+02	4.74E+01	2.43E+02	2.86E+00	-5.04E+03
Environmental aspects on resource use: (DU) 1 ton										
Indicator	**Unit**	**A1**	**A2**	**A3**	**A4**	**C1**	**C2**	**C3**	**C4**	**D**
PERE	MJ	INA	INA	INA	INA	INA	INA	INA	INA	INA
PERM	MJ	INA	INA	INA	INA	INA	INA	INA	INA	INA
PERT	MJ	2.12E+03	9.37E+00	2.25E+02	7.44E-02	2.71E+00	1.12E-02	1.41E+00	2.56E-02	1.22E+02
PENRE	MJ	INA	INA	INA	INA	INA	INA	INA	INA	INA
PENRM	MJ	INA	INA	INA	INA	INA	INA	INA	INA	INA
PENRT	MJ	1.83E+04	1.41E+02	3.10E+03	3.32E+02	5.06E+02	4.98E+01	2.64E+02	3.10E+00	-5.08E+03
SM	kg	8.40E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.21E+02
RSF	MJ	3.02E-01	7.03E+00	0.00E+00	1.66E+01	0.00E+00	2.49E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	MJ	1.23E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	m^3	1.22E+03	6.54E-05	1.18E-01	7.72E-06	8.45E-03	1.16E-06	4.40E-03	1.15E-04	-3.76E+02
Other environmental information describing waste categories: (DU) 1 ton										
Indicator	**Unit**	**A1**	**A2**	**A3**	**A4**	**C1**	**C2**	**C3**	**C4**	**D**
HWD	kg	3.65E-02	4.54E-10	7.53E+00	1.07E-09	1.31E-03	1.61E-10	6.84E-04	4.45E-06	-3.73E-05
NHWD	kg	8.28E+01	2.03E-07	4.62E+00	4.79E-07	6.41E-01	7.18E-08	3.33E-01	2.00E+01	5.77E+00
RWD	kg	1.64E-01	1.17E-09	0.00E+00	2.77E-09	3.31E-03	4.15E-10	1.72E-03	1.93E-05	3.73E-02
CRU	kg	6.49E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MFR	kg	1.46E+01	0.00E+00	1.43E+02	0.00E+00	0.00E+00	0.00E+00	9.80E+02	0.00E+00	0.00E+00
MER	kg	1.34E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EE	MJ per energy carrier	0.00E+00	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. Life cycle assessment (LCA) results of the steel structures with zinc and paint coating produced by KOBEX Sp. z o. o.

Environmental impacts: (DU) 1 ton										
Indicator	**Unit**	**A1**	**A2**	**A3**	**A4**	**C1**	**C2**	**C3**	**C4**	**D**
GWP	kg CO_2 eq.	1.61E+03	9.82E+00	4.74E+02	2.32E+01	3.49E+01	3.48E+00	1.82E+01	1.03E-01	-5.39E+02
ODP	kg CFC 11 eq.	1.86E-05	0.00E+00	2.48E-07	0.00E+00	5.92E-06	0.00E+00	3.08E-06	3.37E-08	3.17E-07
AP	kg SO_2 eq.	6.40E+00	1.11E-01	5.57E-01	2.77E-01	1.58E-01	4.16E-02	8.77E-02	7.48E-04	-1.88E+00
POCP	kg Ethene eq.	6.88E-01	7.82E-03	5.71E+00	2.02E-02	8.03E-03	3.03E-03	4.76E-03	3.14E-05	-2.85E-01
EP	kg $(PO_4)^{3-}$ eq.	9.06E-01	1.97E-02	6.28E-02	4.89E-02	3.66E-02	7.34E-03	2.04E-02	1.61E-04	-1.51E-01
ADPE	kg Sb eq.	2.17E+00	0.00E+00	1.76E-03	0.00E+00	1.80E-05	0.00E+00	9.37E-06	2.40E-07	-1.47E-04
ADPF	MJ	1.73E+04	1.34E+02	4.68E+03	3.16E+02	4.67E+02	4.74E+01	2.43E+02	2.86E+00	-5.04E+03
Environmental aspects on resource use: (DU) 1 ton										
Indicator	**Unit**	**A1**	**A2**	**A3**	**A4**	**C1**	**C2**	**C3**	**C4**	**D**
PERE	MJ	INA	INA	INA	INA	INA	INA	INA	INA	INA
PERM	MJ	INA	INA	INA	INA	INA	INA	INA	INA	INA
PERT	MJ	2.61E+03	9.37E+00	2.49E+02	7.44E-02	2.71E+00	1.12E-02	1.41E+00	2.56E-02	1.22E+02
PENRE	MJ	INA	INA	INA	INA	INA	INA	INA	INA	INA
PENRM	MJ	INA	INA	INA	INA	INA	INA	INA	INA	INA
PENRT	MJ	1.95E+04	1.41E+02	4.91E+03	3.32E+02	5.06E+02	4.98E+01	2.64E+02	3.10E+00	-5.08E+03
SM	kg	8.40E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.21E+02
RSF	MJ	3.15E-01	7.03E+00	0.00E+00	1.66E+01	0.00E+00	2.49E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	MJ	2.46E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	m^3	1.22E+03	6.54E-05	1.18E-01	7.72E-06	8.45E-03	1.16E-06	4.40E-03	1.15E-04	-3.76E+02
Other environmental information describing waste categories: (DU) 1 ton										
Indicator	**Unit**	**A1**	**A2**	**A3**	**A4**	**C1**	**C2**	**C3**	**C4**	**D**
HWD	kg	3.30E-01	4.54E-10	8.37E+00	1.07E-09	1.31E-03	1.61E-10	6.84E-04	4.45E-06	-3.73E-05
NHWD	kg	9.73E+01	2.03E-07	1.13E+01	4.79E-07	6.41E-01	7.18E-08	3.33E-01	2.00E+01	5.77E+00
RWD	kg	1.71E-01	1.17E-09	0.00E+00	2.77E-09	3.31E-03	4.15E-10	1.72E-03	1.93E-05	3.73E-02
CRU	kg	6.49E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MFR	kg	1.46E+01	0.00E+00	1.75E+02	0.00E+00	0.00E+00	0.00E+00	9.80E+02	0.00E+00	0.00E+00
MER	kg	1.34E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EE	MJ per energy carrier	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	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 and ITB PCR A
Independent verification corresponding to ISO 14025 (subclause 8.1.3.) [x] external [ ] internal
External verification of EPD: Halina Prejzner, *Ph.D. Eng* LCA, LCI audit and input data verification: Justyna Tomaszewska, *Ph.D. Eng,* j.tomaszewska@itb.pl Verification of LCA: Michał Piasecki, *Ph.D. D.Sc. Eng.*

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+A1:2013 Sustainability of construction works – Environmental product declarations – Core rules for the product category of construction products
- EN 15942:2011 Sustainability of construction works – Environmental product declarations – Communication format business-to-business
- PN-EN 1090-1+A1:2012 Wykonanie konstrukcji stalowych i aluminiowych -- Część 1: Zasady oceny zgodności elementów konstrukcyjnych
- Department for Business, Energy & Industrial Strategy. Calorific values and density of fuels, 2021. https://www.gov.uk/

KIEROWNIK
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CERTIFICATE № 294/2022
of TYPE III ENVIRONMENTAL DECLARATION

Products:

Steel structures with zinc and paint coatings

Manufacturer:

KOBEX Sp. z o.o.

Duble 71, 36-053 Kamień, 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+A1

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

This certificate, issued for the first time on 7th February 2022 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, February 2022