Environmental Product Declaration Type III ITB No. 127/2020

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Steel structures

MultiPlate, SuperCor and UltraCor

Owner of the EPD

ViaCon Sp z o.o.
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EPD Program Operator

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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 PN-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 PN-EN 15804 (see point 5.3 of the standard).

Life cycle analysis (LCA): A1-A3, C3, C4 and D according to PN-EN 15804 (Cradle to Gate with options)
The year of preparing the EPD: 2020
Product standard: EN 1090-1
Service Life: 100 years for standard products
PCR: ITB-PCR A (PCR based on PN-EN 15804)
Declared unit: 1 tonne of steel structure
Reasons for performing LCA: B2B
Representativeness: Polish product

MANUFACTURER

Fig 1. A view of ViaCon Sp. z o.o. in Rydzyna (Poland).

ViaCon in Poland consists of three companies: ViaCon Sp. z o.o., ViaCon Polska Sp. z o.o. and ViaCon Construction sp. z o.o. All of them are members of ViaCon Group, established in Sweden and Norway in 1986. At present ViaCon Group is made up of approximately 30 companies based in the following countries: Austria, Bulgaria, the Czech Republic, Denmark, Estonia, Finland, France, Lithuania, Latvia, Norway, Poland, Sweden, Hungary, Slovakia, Romania, Turkey and the United Arab Emirates. All companies mentioned above are a part of ViaCon Group that was acquired in September 2018 by Nordic Investment Fund FSN Capital.

PRODUCT DESCRIPTION AND APPLICATION

MultiPlate structures are flexible structures made of galvanized corrugated steel plates can be used for every class of service load provided that appropriate backfilling procedure is performed**.** The products are approved by most of European Road and Railways Administrations and National Standards (KOT-2017/0045 edition 1), possess CE certificate for compliance with PN-EN 1090-1 and HAPAS BBA no. 17/H270.
Steel used for MultiPlate structures is produced in accordance with EN 10025, PN-EN 10027-1 and PN-EN 10113 (minimum yield strength 235 N/mm2; steel standard S235 and S355). Bolts and nuts conform to SS ISO 898-1 i SS ISO 898-6 and BSK 94.

MultiPlate structures range: VM (1-50), VN (1-35), VT (1-35), VR (1-25), VF (1-8), VC (1-80), VE (1-35), VS (1-30), VH (1-42), VA (1-170), VB (1-30), VBL (1-42), VBH (1-20), VG (1-35), V (1-47), BC (1-27), PA (1-100), L (1-59), P (1-34), C (1-34), PE (1-34), E (1-34), U (1-31), G (1-30), UH (1-15), GH (1-10), UL (1-21), GL (1-20), HE (1-36), LE (1-36), A (1-47). Profiles produced range is expanded to include profiles resulting from the additional customer requirements (design, specification)

MultiPlates structures can be used as:

- culverts,
- bridges,
- tunnels,
- under passed,
- ecological crossing,
- pedestrian tunnel,
- hangars,
- warehouse,
- stores for ammunition,
- belt conveyor protection,
- ventilating duct,
- and for reinforcement and reconstruction of existing structures as well.

Fig. 2. Examples of MultiPlates structures.

SuperCor structures are flexible structures made of galvanized corrugated steel plates of a high stiffness. The products are approved by most of European Road and Railways Administrations and National Standards (KOT-2018/0205 edition 1) possess CE certificate for compliance with PN-EN 1090-1 and CSA G401 certificate no Q109016.

SuperCor structures range: SC-R (SC-66R – SC 122R), SC-B (SC-1B – SC 64B), SC-SA (SC-27SA –SC-96SA), SC-NA (SC-1NA – SC-51NA), SC-OA (SC-1OA – SC-59OA), SC-HA (SC-1HA – SC-16HA), SB-H (SB-3H – SB-20H), SB-L (SB-4L – SB-20L), SB-M (SB-15M – SB-20M). Profiles produced range is expanded to include profiles resulting from the additional customer requirements (design, specification).

SuperCor structures can be used for roads and railways and industrial applications such as:

- bridges,
- overpasses,
- tunnels,
- culverts,
- underpasses,
- pedestrian tunnels,
- ecological crossings, hangars,
- shelters,
- underground storages,
- belt conveyor protection.

Fig. 3. Examples of SuperCor structures.

UltraCor structures are the generation of flexible structures with deep corrugation profile which combine advantages of lightweight construction with strength and durability. The products possess CE certificate for compliance with PN-EN 1090-1 and CSA G401 certificate no Q109016.
UltraCor structures range: UC-M (UC-1M – UC 10M), UC-H (UC-1H – UC 10H), UC-SA (UC-1SA – UC-38SA), UC-HA (UC-1HA – UC-17HA), UC-OA (UC-1OA – UC-50OA), UC-NA (UC-1NA – UC-47NA), UCA (UCA-1 – UCA-2), UCH (UCH-1 – UCH-3). Profiles produced range is expanded to include profiles resulting from the additional customer requirements (design, specification).

UltraCor structures are used for roads and railways and industrial applications as well as for reinforcement and reconstruction of existing structures such us:

- bridges,
- overpasses,
- tunnels,
- culverts,
- underpasses,
- pedestrian tunnels,
- ecological crossings,
- hangars,
- shelters,
- underground storages.

Fig. 4. Examples of UltraCor structures.

LIFE CYCLE ASSESSMENT (LCA) – general rules applied

Allocation

The allocation rules used for this EPD are based on general ITB PCR A. Production of the steel structures MultiPlate, SuperCor and UltraCor is a line process in one factory of ViaCon Sp. z o.o. in Rydzyna (Poland). The zinc coating (hot-dip galvanization) and paint coating are outsourced a company located in Poland. Allocation was done on product mass basis. All impacts from raw materials extraction are allocated in A1 module of the LCA. Impacts from line production of ViaCon Sp z o.o. were inventoried and allocated to steel structures production as following: 56.5% MultiPlate, 32.7% SuperCor and 10.8% UltraCor. Impacts from line production of the outsourced company were inventoried and allocated to zinc coating: 12.5% MultiPlate, 6.5% SuperCor and 1.5% UltraCor, and paint coating: 46.1% MultiPlate, 22.0% SuperCor and 11.4% UltraCor. Utilization of packaging material was taken into consideration. Module A2 includes transport of raw materials from their

suppliers to of ViaCon Sp. z o.o. in Rydzyna and to the outsourced company. Municipal wastes of both factories were allocated to module A3. Energy supply, emissions and wastes were inventoried separately for ViaCon Sp z o.o. in Rydzyna and the outsourced company and were allocated to module A3.

System limits

The life cycle analysis of the declared products covers “Product Stage”, A1-A3, C3, C4 and D modules (Cradle to Gate with options) in accordance with PN-EN 15804+A1:2014-04 and ITB PCR A. The details of systems limits are provided in product technical report. All materials and energy consumption inventoried in factories were included in the calculations. 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 all available emission measurements. It can be assumed that the total sum of omitted processes does not exceed 5% of all impact categories. In accordance with PN-EN 15804+A1:2014 -04, 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

Steel, bolts, wood, chemicals, additives, ancillary materials and packaging materials come from both Polish and foreign suppliers. Means of transport include trucks with load: <10t, 10 – 16t and >16. For calculation purposes Polish and European fuel averages are applied.

A3: Production

The production process of the steel structures MultiPlate, SuperCor and UltraCor by ViaCon Sp. z o.o is presented in Fig. 5.

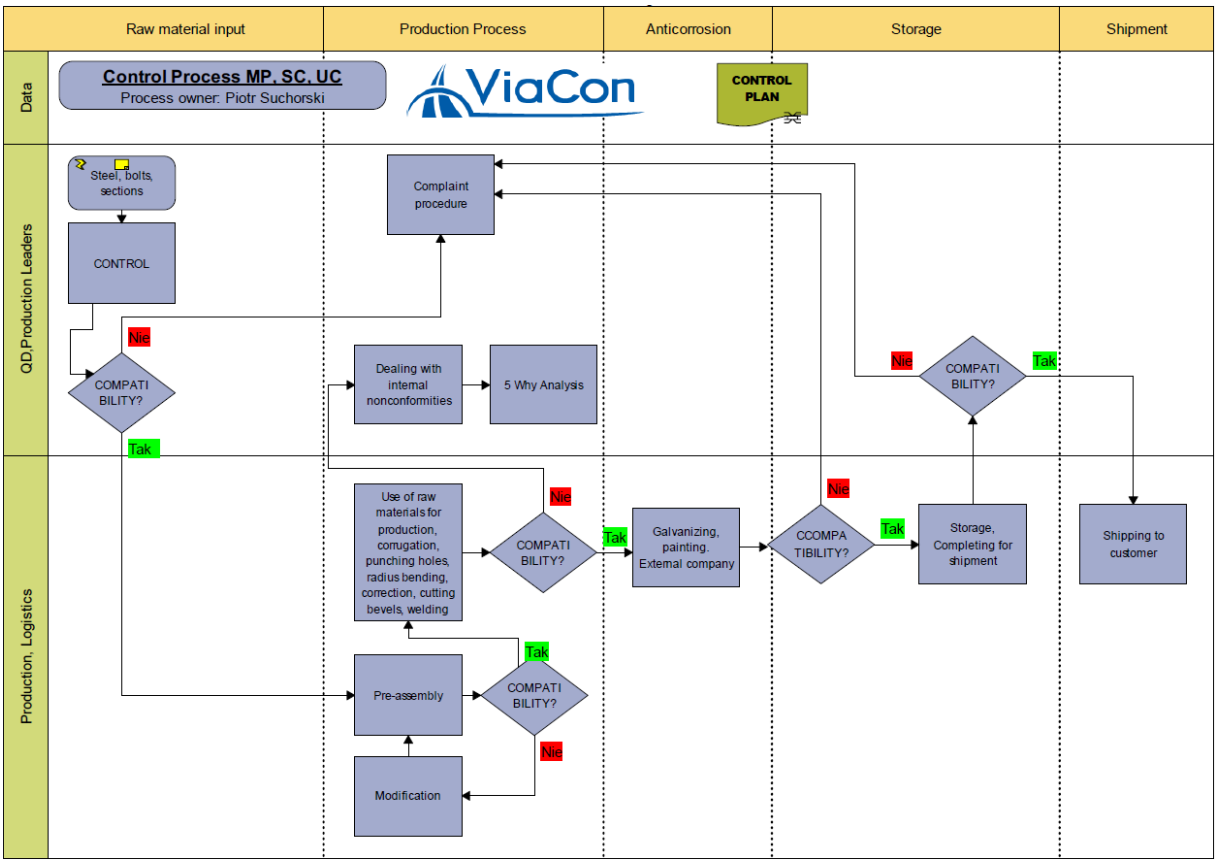

Fig 5. A scheme of manufacturing of steel structures MultiPlate, SuperCor and UltraCor by ViaCon Sp. z o.o.

C3, C4 and D Modules: End-of-life scenarios

At the end of life the steel structures MultiPlate, SuperCor and UltraCor are deconstructed with the use of heavy machineries. It is assumed that 98% of the resulting steel scrap undergo recycling after cutting and shredding while the remaining 2% is forwarded to landfill in the form of mixed construction and demolition wastes. Waste processing (module C3) includes impacts associated with collecting of the steel scrap, transport to scrap-yard, sorting and pressing to blocks. Benefits and loads beyond the system boundary (D) were calculated using a net scrap formulation proposed by World Steel Association where the net scrap is determined as a difference between the amount of steel recycled at end-of-life and the scrap input from previous product life cycle (assumed 70%). Utilization of packaging material such as stretch foil and wooden pallets which constitute less than 0.3% of the total system flows was not taken into consideration.

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

The values determined to calculate the LCA originate from verified ViaCon Sp z o.o. inventory data.

Assumptions and estimates

The impacts of the representative the steel structures MultiPlate, SuperCor and UltraCor were aggregated using weighted average. Impacts were inventoried and calculated for all steel structures MultiPlate, SuperCor and UltraCor.

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.3.6, specific EPDs, ITB-Data. Specific data quality analysis was a part of external ISO 14001 audit.

LIFE CYCLE ASSESSMENT (LCA) – Results

Declared unit

The declaration refers to declared unit (DU) – 1 tonne of the steel structures MultiPlate, SuperCor and UltraCor manufactured by ViaCon Sp z o.o.

Table 1. System boundaries for the environmental characteristic the steel structures MultiPlate, SuperCor and UltraCor.

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

Steel structures MultiPlate, SuperCor and UltraCor
without coating

Environmental impacts: (DU) 1 tonne								
Indicator	**Unit**	**A1**	**A2**	**A3**	**A1-A3**	**C3**	**C4**	**D**
Global warming potential	kg CO_2 eq.	1.79E+03	2.81E+01	5.00E+01	1.86E+03	2.78E+01	3.31E+01	-1.26E+03
Depletion potential of the stratospheric ozone layer	kg CFC 11 eq.	4.03E-08	0.00E+00	0.00E+00	4.03E-08	2.68E-06	4.27E-06	-2.25E-08
Acidification potential of soil and water	kg SO_2 eq.	9.04E+00	2.05E-01	5.62E-02	9.30E+00	1.72E-01	1.98E-01	-7.29E+00
Formation potential of tropospheric ozone	kg Ethene eq.	1.14E+00	1.50E-02	5.38E-03	1.16E+00	9.93E-03	1.13E-02	-8.87E-01
Eutrophication potential	kg $(PO_4)^{3-}$ eq.	8.18E-01	3.62E-02	5.36E-03	8.60E-01	7.23E-02	8.23E-02	-2.16E-01
Abiotic depletion potential (ADP-elements) for non-fossil resources	kg Sb eq.	4.55E-04	0.00E+00	1.85E-04	6.40E-04	5.17E-03	5.34E-03	-8.12E-05
Abiotic depletion potential (ADP-fossil fuels) for fossil resources	MJ	1.81E+04	2.33E+02	4.84E+02	1.88E+04	3.86E+02	5.05E+02	-1.23E+04
Environmental aspects on resource use: (DU) 1 tonne								
Indicator	**Unit**	**A1**	**A2**	**A3**	**A1-A3**	**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
Use of renewable primary energy resources used as raw materials	MJ	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	1.01E+03	1.63E+01	1.51E+01	1.05E+03	7.01E+01	1.08E+02	-3.32E+02
Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials	MJ	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
Total use of non-renewable primary energy resources (primary energy and primary energy resources used as raw materials)	MJ	1.90E+04	2.45E+02	5.08E+02	1.98E+04	3.52E+02	4.55E+02	-1.46E+04
Use of secondary material	kg	8.79E+02	0.00E+00	0.00E+00	8.79E+02	0.00E+00	0.00E+00	INA
Use of renewable secondary fuels	MJ	6.51E-03	1.22E+01	0.00E+00	1.22E+01	0.00E+00	0.00E+00	INA
Use of non-renewable secondary fuels	MJ	6.76E-03	0.00E+00	0.00E+00	6.76E-03	0.00E+00	0.00E+00	INA
Net use of fresh water	m^3	INA	INA	INA	INA	INA	INA	INA
Other environmental information describing waste categories: (DU) 1 tonne								
Indicator	**Unit**	**A1**	**A2**	**A3**	**A1-A3**	**C3**	**C4**	**D**
Hazardous waste disposed	kg	4.35E+00	7.73E-05	2.64E-01	4.61E+00	9.39E-04	1.28E-03	-2.29E+00
Non-hazardous waste disposed	kg	6.42E+01	7.18E-02	1.24E+00	6.55E+01	1.10E+01	1.84E+01	-5.06E+01
Radioactive waste disposed	kg	3.71E-01	0.00E+00	0.00E+00	3.71E-01	1.62E-03	2.94E-03	-1.81E-01
Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	INA
Materials for recycling	kg	0.00E+00	0.00E+00	6.08E+01	6.08E+01	0.00E+00	0.00E+00	INA
Materials for energy recover	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	INA
Exported energy	MJ per energy carrier	INA	INA	INA	INA	INA	INA	INA

Steel structures MultiPlate, SuperCor and UltraCor
with zinc coating

Environmental impacts: (DU) 1 tonne								
Indicator	**Unit**	**A1**	**A2**	**A3**	**A1-A3**	**C3**	**C4**	**D**
Global warming potential	kg CO_2 eq.	1.88E+03	2.81E+01	2.28E+02	2.14E+03	2.78E+01	3.31E+01	-1.26E+03
Depletion potential of the stratospheric ozone layer	kg CFC 11 eq.	8.01E-06	0.00E+00	0.00E+00	8.01E-06	2.68E-06	4.27E-06	-2.25E-08
Acidification potential of soil and water	kg SO_2 eq.	9.72E+00	2.05E-01	3.18E-01	1.02E+01	1.72E-01	1.98E-01	-7.29E+00
Formation potential of tropospheric ozone	kg Ethene eq.	1.17E+00	1.50E-02	5.38E-03	1.19E+00	9.93E-03	1.13E-02	-8.87E-01
Eutrophication potential	kg $(PO_4)^{3-}$ eq.	9.42E-01	3.62E-02	3.77E-02	1.02E+00	7.23E-02	8.23E-02	-2.16E-01
Abiotic depletion potential (ADP-elements) for non-fossil resources	kg Sb eq.	2.17E+00	0.00E+00	8.44E-04	2.17E+00	5.17E-03	5.34E-03	-8.12E-05
Abiotic depletion potential (ADP-fossil fuels) for fossil resources	MJ	1.97E+04	2.33E+02	2.21E+03	2.22E+04	3.86E+02	5.05E+02	-1.23E+04
Environmental aspects on resource use: (DU) 1 tonne								
Indicator	**Unit**	**A1**	**A2**	**A3**	**A1-A3**	**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
Use of renewable primary energy resources used as raw materials	MJ	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	1.51E+03	1.63E+01	3.92E+01	1.57E+03	7.01E+01	1.08E+02	-3.32E+02
Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials	MJ	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
Total use of non-renewable primary energy resources (primary energy and primary energy resources used as raw materials)	MJ	2.02E+04	2.45E+02	2.32E+03	2.28E+04	3.52E+02	4.55E+02	-1.46E+04
Use of secondary material	kg	8.79E+02	0.00E+00	0.00E+00	8.79E+02	0.00E+00	0.00E+00	INA
Use of renewable secondary fuels	MJ	1.94E-02	1.22E+01	0.00E+00	1.23E+01	0.00E+00	0.00E+00	INA
Use of non-renewable secondary fuels	MJ	1.29E-01	0.00E+00	0.00E+00	1.29E-01	0.00E+00	0.00E+00	INA
Net use of fresh water	m^3	INA	INA	INA	INA	INA	INA	INA
Other environmental information describing waste categories: (DU) 1 tonne								
Indicator	**Unit**	**A1**	**A2**	**A3**	**A1-A3**	**C3**	**C4**	**D**
Hazardous waste disposed	kg	4.64E+00	7.73E-05	1.10E+00	5.74E+00	9.39E-04	1.28E-03	-2.29E+00
Non-hazardous waste disposed	kg	7.87E+01	7.18E-02	7.94E+00	8.67E+01	1.10E+01	1.84E+01	-5.06E+01
Radioactive waste disposed	kg	3.78E-01	0.00E+00	0.00E+00	3.78E-01	1.62E-03	2.94E-03	-1.81E-01
Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	INA
Materials for recycling	kg	0.00E+00	0.00E+00	9.31E+01	9.31E+01	0.00E+00	0.00E+00	INA
Materials for energy recover	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	INA
Exported energy	MJ per energy carrier	INA	INA	INA	INA	INA	INA	INA

Steel structures MultiPlate, SuperCor and UltraCor
with paint coating

Environmental impacts: (DU) 1 tonne								
Indicator	**Unit**	**A1**	**A2**	**A3**	**A1-A3**	**C3**	**C4**	**D**
Global warming potential	kg CO_2 eq.	1.86E+03	2.81E+01	2.09E+03	2.78E+01	3.31E+01	3.31E+01	-1.26E+03
Depletion potential of the stratospheric ozone layer	kg CFC 11 eq.	5.39E-06	0.00E+00	5.39E-06	2.68E-06	4.27E-06	4.27E-06	-2.25E-08
Acidification potential of soil and water	kg SO_2 eq.	9.45E+00	2.05E-01	1.00E+01	1.72E-01	1.98E-01	1.98E-01	-7.29E+00
Formation potential of tropospheric ozone	kg Ethene eq.	1.17E+00	1.50E-02	5.56E+00	9.93E-03	1.13E-02	1.13E-02	-8.87E-01
Eutrophication potential	kg $(PO_4)^{3-}$ eq.	9.61E-01	3.62E-02	1.03E+00	7.23E-02	8.23E-02	8.23E-02	-2.16E-01
Abiotic depletion potential (ADP-elements) for non-fossil resources	kg Sb eq.	1.23E-03	0.00E+00	2.00E-03	5.17E-03	5.34E-03	5.34E-03	-8.12E-05
Abiotic depletion potential (ADP-fossil fuels) for fossil resources	MJ	1.92E+04	2.33E+02	2.14E+04	3.86E+02	5.05E+02	5.05E+02	-1.23E+04
Environmental aspects on resource use: (DU) 1 tonne								
Indicator	**Unit**	**A1**	**A2**	**A3**	**A1-A3**	**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
Use of renewable primary energy resources used as raw materials	MJ	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	1.12E+03	1.63E+01	1.22E+03	7.01E+01	1.08E+02	1.08E+02	-3.32E+02
Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials	MJ	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
Total use of non-renewable primary energy resources (primary energy and primary energy resources used as raw materials)	MJ	2.02E+04	2.45E+02	2.25E+04	3.52E+02	4.55E+02	4.55E+02	-1.46E+04
Use of secondary material	kg	8.79E+02	0.00E+00	8.79E+02	0.00E+00	0.00E+00	0.00E+00	INA
Use of renewable secondary fuels	MJ	1.94E-02	1.22E+01	1.94E-02	1.23E+01	0.00E+00	0.00E+00	INA
Use of non-renewable secondary fuels	MJ	1.29E-01	0.00E+00	1.24E+01	1.29E-01	0.00E+00	0.00E+00	INA
Net use of fresh water	m^3	INA	INA	INA	INA	INA	INA	INA
Other environmental information describing waste categories: (DU) 1 tonne								
Indicator	**Unit**	**A1**	**A2**	**A3**	**A1-A3**	**C3**	**C4**	**D**
Hazardous waste disposed	kg	4.35E+00	7.73E-05	1.20E+01	9.39E-04	1.28E-03	1.28E-03	-2.29E+00
Non-hazardous waste disposed	kg	9.55E+01	7.18E-02	1.01E+02	1.10E+01	1.84E+01	1.84E+01	-5.06E+01
Radioactive waste disposed	kg	3.71E-01	0.00E+00	3.71E-01	1.62E-03	2.94E-03	2.94E-03	-1.81E-01
Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	INA
Materials for recycling	kg	1.25E-02	0.00E+00	1.55E+02	0.00E+00	0.00E+00	0.00E+00	INA
Materials for energy recover	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	INA
Exported energy	MJ per energy carrier	INA	INA	INA	INA	INA	INA	INA

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 PN-EN 15804 and ITB PCR A
Independent verification corresponding to ISO 14025 (subclause 8.1.3.) ☒ external ☐ internal
External verification of EPD: Ph.D. Halina Prejzner Input data verification, LCI audit, LCA: Ph.D. Eng. Justyna Tomaszewska, j.tomaszewska@itb.pl Verification of LCA: Ph.D. 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 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
- PN-EN 15804+A1:2014-04 - Zrównoważoność obiektów budowlanych -- Deklaracje środowiskowe wyrobu -- Podstawowe zasady kategoryzacji wyrobów budowlanych
- PN-EN 15804+A2:2020-03 Zrównoważenie robót budowlanych – Deklaracje środowiskowe wyrobu – Podstawowe zasady kategoryzacji wyrobów budowlanych
- PN-EN 15942:2012 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
- KOBiZE Wskaźniki emisyjności CO_2, SO_2, NO_x, CO i pyłu całkowitego dla energii elektrycznej, grudzień 2018
- World Steel Association 2017 Life Cycle inventory methodology report for steel products

p.o. KIEROWNIKA
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dr inż. Agnieszka Winkler-Skalna

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00-611 Warsaw, Filtrowa 1

Thermal Physics, Acoustics and Environment Department
02-656 Warsaw, Ksawerów 21

CERTIFICATE № 127/2020
of TYPE III ENVIRONMENTAL DECLARATION

Product:

steel structures: MultiPlate, SuperCor and UltraCor

Manufacturer:

ViaCon Sp z o.o.

Przemysłowa 6, 64-130 Rydzyna, 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 21th October 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
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Warsaw, October 2020