

This appendix refers to the EPD MD,21007-EN, developed according to EN15804+A2:2019.

Results in the appendix communicates LCA results in the format described in EN15804+A1:2013, in order to accommodate a need in the transition period between the two standard revisions. The appendix cannot stand alone, as the reference EPD describes the basis of the assessment.

**Product 1: Painted structural steel**

ENVIRONMENTAL IMPACTS PER TON										
Parameter	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
GWP	[kg CO <sub>2</sub> -eq.]	1,30E+03	1.12E+01	6.02E-01	0.00E+00	6.02E-01	8.28E+00	4,12E+01	1.77E-01	-6.32E+02
ODP	[kg CFC11-eq.]	1,01E-11	2.79E-15	1.39E-16	0.00E+00	1.39E-16	2.06E-15	3,05E-06	5.73E-16	-1.53E-12
AP	[kg SO <sub>2</sub> -eq.]	2,72E+00	9.52E-03	2.18E-03	0.00E+00	2.18E-03	2.11E-02	2,45E+00	5.00E-04	-1.02E+00
EP	[kg PO <sub>4</sub> <sup>3-</sup> -eq.]	3,19E-01	1.76E-03	5.09E-04	0.00E+00	5.09E-04	4.99E-03	9,46E-02	5.32E-05	-5.31E-02
POCP	[kg ethene-eq.]	3,53E-01	-4.43E-05	2.09E-04	0.00E+00	2.09E-04	-7.34E-03	1,82E-02	4.62E-05	-3.15E-01
ADPE	[kg Sb-eq.]	1,55E-04	9.23E-07	4.62E-08	0.00E+00	4.62E-08	6.83E-07	1,37E-03	1.33E-08	-5.17E-05
ADPF	[MJ]	1,29E+04	1.51E+02	7.56E+00	0.00E+00	7.56E+00	1.12E+02	3,30E+02	2.69E+00	-5.97E+03
Caption	GWP = Global warming potential; ODP = Ozone depletion potential; AP = Acidification potential of soil and water; EP = Eutrophication potential; POCP = Photochemical ozone creation potential; ADPE = Abiotic depletion potential for non fossil resources; ADPF = Abiotic depletion potential for fossil resources									

RESOURCE USE PER TON										
Parameter	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
PERE	[MJ]	2,68E+03	8.78E+00	4.40E-01	0.00E+00	4.40E-01	6.50E+00	5.57E+01	1.94E-01	5.04E+02
PERM	[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	0.00E+00
PERT	[MJ]	2,68E+03	8.78E+00	4.40E-01	0.00E+00	4.40E-01	6.50E+00	5.57E+01	1.94E-01	5.04E+02
PENRE	[MJ]	1,37E+04	1.53E+02	7.63E+00	0.00E+00	7.63E+00	1.13E+02	3.81E+02	2.77E+00	-5.80E+03
PENRM	[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	0.00E+00
PENRT	[MJ]	1,37E+04	1.53E+02	7.63E+00	0.00E+00	7.63E+00	1.13E+02	3.81E+02	2.77E+00	-5.80E+03
SM	[kg]	5,89E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RSF	[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	0.00E+00
NRSF	[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	0.00E+00
FW	[m <sup>3</sup> ]	1,05E+00	1.02E-02	5.12E-04	0.00E+00	5.12E-04	7.58E-03	2.35E-01	3.71E-05	-2.93E+00
Caption	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									

WASTE CATEGORIES AND OUTPUT FLOWS PER TON										
Parameter	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
HWD	[kg]	1,09E-04	7.05E-06	3.53E-07	0.00E+00	3.53E-07	5.22E-06	4.28E-08	1.26E-08	1.56E-06
NHWD	[kg]	1,42E+01	2.42E-02	1.21E-03	0.00E+00	1.21E-03	1.79E-02	3.34E+00	3.93E+00	6.89E+01
RWD	[kg]	2,74E-01	2.81E-04	1.41E-05	0.00E+00	1.41E-05	2.08E-04	5.10E-04	3.29E-05	-5.00E-03
CRU	[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	0.00E+00
MFR	[kg]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.89E+02	0.00E+00	0.00E+00
MER	[kg]	6.93E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.29E+01	0.00E+00	0.00E+00
EEE	[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	0.00E+00
EET	[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	0.00E+00
Caption	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; EEE = Exported electrical energy; EET = Exported thermal energy									

**Product 2: Galvanised structural steel**

ENVIRONMENTAL IMPACTS PER TON										
Parameter	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
GWP	[kg CO <sub>2</sub> -eq.]	1,45E+03	1.12E+01	6.02E-01	0.00E+00	6.02E-01	8.18E+00	2.27E+01	1.78E-01	-6.30E+02
ODP	[kg CFC11-eq.]	1,03E-11	2.79E-15	1.39E-16	0.00E+00	1.39E-16	2.04E-15	3.05E-06	5.76E-16	-1.47E-12
AP	[kg SO <sub>2</sub> -eq.]	2,82E+00	9.52E-03	2.18E-03	0.00E+00	2.18E-03	2.08E-02	2.40E-01	5.02E-04	-1.02E+00
EP	[kg PO <sub>4</sub> <sup>3-</sup> -eq.]	3,33E-01	1.76E-03	5.09E-04	0.00E+00	5.09E-04	4.93E-03	9.34E-02	5.34E-05	-5.23E-02
POCP	[kg ethene-eq.]	3,40E-01	-4.43E-05	2.09E-04	0.00E+00	2.09E-04	-7.25E-03	1.78E-02	4.64E-05	-3.16E-01
ADPE	[kg Sb-eq.]	3,13E-02	9.23E-07	4.62E-08	0.00E+00	4.62E-08	6.74E-07	1.37E-03	1.34E-08	-5.17E-05
ADPF	[MJ]	1,50E+04	1.51E+02	7.56E+00	0.00E+00	7.56E+00	1.10E+02	3.23E+02	2.70E+00	-5.94E+03
Caption	GWP = Global warming potential; ODP = Ozone depletion potential; AP = Acidification potential of soil and water; EP = Eutrophication potential; POCP = Photochemical ozone creation potential; ADPE = Abiotic depletion potential for non fossil resources; ADPF = Abiotic depletion potential for fossil resources									

RESOURCE USE PER TON										
Parameter	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
PERE	[MJ]	2,80E+03	8.78E+00	4.40E-01	0.00E+00	4.40E-01	6.42E+00	5.37E+01	1.95E-01	5.30E+02
PERM	[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	0.00E+00
PERT	[MJ]	2,80E+03	8.78E+00	4.40E-01	0.00E+00	4.40E-01	6.42E+00	5.37E+01	1.95E-01	5.30E+02
PENRE	[MJ]	1,60E+04	1.53E+02	7.63E+00	0.00E+00	7.63E+00	1.11E+02	3.70E+02	2.79E+00	-5.77E+03
PENRM	[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	0.00E+00
PENRT	[MJ]	1,60E+04	1.53E+02	7.63E+00	0.00E+00	7.63E+00	1.11E+02	3.70E+02	2.79E+00	-5.77E+03
SM	[kg]	5,92E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RSF	[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	0.00E+00
NRSF	[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	0.00E+00
FW	[m <sup>3</sup> ]	1,16E+00	1.02E-02	5.12E-04	0.00E+00	5.12E-04	7.48E-03	1.62E-01	3.72E-05	-2.92E+00
Caption	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									

WASTE CATEGORIES AND OUTPUT FLOWS PER TON										
Parameter	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
HWD	[kg]	3,96E-05	7.05E-06	3.53E-07	0.00E+00	3.53E-07	5.16E-06	0.00E+00	1.26E-08	1.61E-06
NHWD	[kg]	1,51E+01	2.42E-02	1.21E-03	0.00E+00	1.21E-03	1.77E-02	0.00E+00	3.95E+00	6.93E+01
RWD	[kg]	3,07E-01	2.81E-04	1.41E-05	0.00E+00	1.41E-05	2.06E-04	0.00E+00	3.30E-05	2.09E-04
CRU	[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	0.00E+00
MFR	[kg]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.91E+02	0.00E+00	0.00E+00
MER	[kg]	6.93E+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
EEE	[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	0.00E+00
EET	[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	0.00E+00
Caption	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; EEE = Exported electrical energy; EET = Exported thermal energy									

Checked and approved by



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