

This appendix refers to the EPD MD-23061-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.

**Contrast Freestyle steel product**  
**CF Corten, EN15804+A1**

ENVIRONMENTAL EFFECTS PER PRODUKT PER KG							
Parameter	Unit	A1-A3	C1	C2	C3	C4	D
GWP	[kg CO2-eq.]	3,08E+00	2,60E-04	1,66E-03	2,29E-02	7,10E-04	-1,34E+00
ODP	[kg CFC11-eq.]	4,04E-12	4,05E-17	2,58E-16	2,71E-13	2,25E-15	4,72E-12
AP	[kg SO2-eq.]	1,49E-02	2,58E-06	1,77E-06	2,81E-05	4,24E-06	-2,49E-03
EP	[kg PO43--eq.]	5,77E-04	5,66E-07	3,87E-07	4,24E-06	4,81E-07	-2,41E-04
POCP	[kg ethene-eq.]	1,35E-03	2,73E-07	-1,74E-07	2,71E-06	3,19E-07	-3,74E-04
ADPE	[kg Sb-eq.]	3,99E-05	1,74E-11	1,11E-10	1,70E-09	3,53E-11	-1,31E-08
ADPF	[MJ]	3,24E+01	3,54E-03	2,25E-02	2,82E-01	9,59E-03	-1,05E+01
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						

**CF Corten, EN15804+A1**

RESSOURCE CONSUMPTION PER PRODUKT PER KG							
Parameter	Unit	A1-A3	C1	C2	C3	C4	D
PERE	[MJ]	3,84E+00	2,62E-04	1,67E-03	7,05E-02	1,63E-03	1,68E+00
PERM	[MJ]	2,93E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	[MJ]	4,14E+00	2,62E-04	1,67E-03	7,05E-02	1,63E-03	1,68E+00
PENRE	[MJ]	3,31E+01	3,61E-03	2,30E-02	5,15E-01	1,00E-02	-1,02E+01
PENRM	[MJ]	6,07E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	[MJ]	3,37E+01	3,61E-03	2,30E-02	5,15E-01	1,00E-02	-1,02E+01
SM	[kg]	1,10E-01	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
NRSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	[m³]	4,14E+00	2,62E-04	1,67E-03	7,05E-02	1,63E-03	1,68E+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 = Net use of fresh water						

**CF Corten, EN15804+A1**

WASTE CATEGORIES AND OUTPUT FLOWS PER PRODUKT PER KG							
Parameter	Unit	A1-A3	C1	C2	C3	C4	D
HWD	[kg]	1,12E-07	1,12E-14	7,12E-14	2,98E-11	2,18E-13	-2,58E-11
NHWD	[kg]	2,00E-01	5,51E-07	3,51E-06	1,14E-04	5,00E-02	-2,03E-02
RWD	[kg]	2,12E-04	6,76E-09	4,30E-08	8,02E-05	1,14E-07	1,79E-04
CRU	[kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MFR	[kg]	2,18E-02	0,00E+00	0,00E+00	9,50E-01	0,00E+00	0,00E+00
MER	[kg]	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
EET	[MJ]	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						

**CF Mild, EN15804+A1**

ENVIRONMENTAL EFFECTS PER PRODUKT PER KG							
Parameter	Unit	A1-A3	C1	C2	C3	C4	D
GWP	[kg CO2-eq.]	2,98E+00	2,60E-04	1,66E-03	2,29E-02	7,10E-04	-1,32E+00
ODP	[kg CFC11-eq.]	3,66E-12	4,05E-17	2,58E-16	2,71E-13	2,25E-15	4,66E-12
AP	[kg SO2-eq.]	5,93E-03	2,58E-06	1,77E-06	2,81E-05	4,24E-06	-2,45E-03
EP	[kg PO43--eq.]	5,28E-04	5,66E-07	3,87E-07	4,24E-06	4,81E-07	-2,38E-04
POCP	[kg ethene-eq.]	1,00E-03	2,73E-07	-1,74E-07	2,71E-06	3,19E-07	-3,69E-04
ADPE	[kg Sb-eq.]	2,51E-05	1,74E-11	1,11E-10	1,70E-09	3,53E-11	-1,29E-08
ADPF	[MJ]	3,16E+01	3,54E-03	2,25E-02	2,82E-01	9,59E-03	-1,03E+01
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						

**CF Mild, EN15804+A1**

RESSOURCE CONSUMPTION PER PRODUKT PER KG							
Parameter	Unit	A1-A3	C1	C2	C3	C4	D
PERE	[MJ]	3,28E+00	2,62E-04	1,67E-03	7,05E-02	1,63E-03	1,64E+00
PERM	[MJ]	4,78E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	[MJ]	3,76E+00	2,62E-04	1,67E-03	7,05E-02	1,63E-03	1,66E+00
PENRE	[MJ]	3,16E+01	3,61E-03	2,30E-02	5,15E-01	1,00E-02	-1,01E+01
PENRM	[MJ]	1,02E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	[MJ]	3,27E+01	3,61E-03	2,30E-02	5,15E-01	1,00E-02	-1,01E+01
SM	[kg]	1,16E-01	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
NRSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	[m³]	7,94E-03	2,87E-07	1,83E-06	1,18E-04	2,53E-06	-8,61E-04
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 = Net use of fresh water						

**CF Mild, EN15804+A1**

WASTE CATEGORIES AND OUTPUT FLOWS PER PRODUKT PER KG							
Parameter	Unit	A1-A3	C1	C2	C3	C4	D
HWD	[kg]	1,01E-07	1,12E-14	7,12E-14	2,98E-11	2,18E-13	-2,54E-11
NHWD	[kg]	1,32E-01	5,51E-07	3,51E-06	1,14E-04	5,00E-02	-2,00E-02
RWD	[kg]	1,35E-04	6,76E-09	4,30E-08	8,02E-05	1,14E-07	1,77E-04
CRU	[kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MFR	[kg]	4,85E-02	0,00E+00	0,00E+00	9,50E-01	0,00E+00	0,00E+00
MER	[kg]	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
EET	[MJ]	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						

**CF HDG, EN15804+A1**

ENVIRONMENTAL EFFECTS PER PRODUKT PER KG							
Parameter	Unit	A1-A3	C1	C2	C3	C4	D
GWP	[kg CO2-eq.]	3,16E+00	2,60E-04	1,66E-03	2,29E-02	7,10E-04	-1,40E+00
ODP	[kg CFC11-eq.]	6,14E-12	4,05E-17	2,58E-16	2,71E-13	2,25E-15	4,94E-12
AP	[kg SO2-eq.]	6,87E-03	2,58E-06	1,77E-06	2,81E-05	4,24E-06	-2,60E-03
EP	[kg PO43--eq.]	6,93E-04	5,66E-07	3,87E-07	4,24E-06	4,81E-07	-2,52E-04
POCP	[kg ethene-eq.]	8,34E-04	2,73E-07	-1,74E-07	2,71E-06	3,19E-07	-3,92E-04
ADPE	[kg Sb-eq.]	9,61E-05	1,74E-11	1,11E-10	1,70E-09	3,53E-11	-1,37E-08
ADPF	[m <sup>3</sup> ]	3,00E+01	3,54E-03	2,25E-02	2,82E-01	9,59E-03	-1,09E+01
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						

**CF HDG, EN15804+A1**

RESSOURCE CONSUMPTION PER PRODUKT PER KG							
Parameter	Unit	A1-A3	C1	C2	C3	C4	D
PERE	[MJ]	4,89E+00	2,62E-04	1,67E-03	7,05E-02	1,63E-03	1,76E+00
PERM	[MJ]	4,16E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	[MJ]	5,31E+00	2,62E-04	1,67E-03	7,05E-02	1,63E-03	1,76E+00
PENRE	[MJ]	3,11E+01	3,61E-03	2,30E-02	5,15E-01	1,00E-02	-1,07E+01
PENRM	[MJ]	5,75E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	[MJ]	3,16E+01	3,61E-03	2,30E-02	5,15E-01	1,00E-02	-1,07E+01
SM	[kg]	1,81E-01	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
NRSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	[m <sup>3</sup> ]	5,33E-03	2,87E-07	1,83E-06	1,18E-04	2,53E-06	-9,13E-04
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 = Net use of fresh water						

**CF HDG, EN15804+A1**

WASTE CATEGORIES AND OUTPUT FLOWS PER PRODUKT PER KG							
Parameter	Unit	A1-A3	C1	C2	C3	C4	D
HWD	[kg]	9,49E-07	1,12E-14	7,12E-14	2,98E-11	2,18E-13	-2,70E-11
NHWD	[kg]	1,58E-01	5,51E-07	3,51E-06	1,14E-04	5,00E-02	-2,12E-02
RWD	[kg]	3,87E-04	6,76E-09	4,30E-08	8,02E-05	1,14E-07	1,88E-04
CRU	[kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MFR	[kg]	4,94E-02	0,00E+00	0,00E+00	9,50E-01	0,00E+00	0,00E+00
MER	[kg]	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
EET	[MJ]	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						

**CF Coated, EN15804+A1**

ENVIRONMENTAL EFFECTS PER PRODUKT PER KG							
Parameter	Unit	A1-A3	C1	C2	C3	C4	D
GWP	[kg CO2-eq.]	3,13E+00	2,60E-04	1,66E-03	2,29E-02	7,10E-04	-1,37E+00
ODP	[kg CFC11-eq.]	7,67E-12	4,05E-17	2,58E-16	2,71E-13	2,25E-15	4,81E-12
AP	[kg SO2-eq.]	6,68E-03	2,58E-06	1,77E-06	2,81E-05	4,24E-06	-2,54E-03
EP	[kg PO43--eq.]	6,73E-04	5,66E-07	3,87E-07	4,24E-06	4,81E-07	-2,45E-04
POCP	[kg ethene-eq.]	9,78E-04	2,73E-07	-1,74E-07	2,71E-06	3,19E-07	-3,82E-04
ADPE	[kg Sb-eq.]	4,63E-05	1,74E-11	1,11E-10	1,70E-09	3,53E-11	-1,34E-08
ADPF	[MJ]	3,34E+01	3,54E-03	2,25E-02	2,82E-01	9,59E-03	-1,07E+01
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						

**CF Coated, EN15804+A1**

RESSOURCE CONSUMPTION PER PRODUKT PER KG							
Parameter	Unit	A1-A3	C1	C2	C3	C4	D
PERE	[MJ]	3,95E+00	2,62E-04	1,67E-03	7,05E-02	1,63E-03	1,71E+00
PERM	[MJ]	8,60E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	[MJ]	4,81E+00	2,62E-04	1,67E-03	7,05E-02	1,63E-03	1,71E+00
PENRE	[MJ]	3,51E+01	3,61E-03	2,30E-02	5,15E-01	1,00E-02	-1,04E+01
PENRM	[MJ]	1,19E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	[MJ]	3,53E+01	3,61E-03	2,30E-02	5,15E-01	1,00E-02	-1,04E+01
SM	[kg]	9,82E-02	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
NRSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	[m³]	2,00E-02	2,87E-07	1,83E-06	1,18E-04	2,53E-06	-8,89E-04
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 = Net use of fresh water						

**CF Coated, EN15804+A1**

WASTE CATEGORIES AND OUTPUT FLOWS PER PRODUKT PER KG							
Parameter	Unit	A1-A3	C1	C2	C3	C4	D
HWD	[kg]	3,36E-08	1,12E-14	7,12E-14	2,98E-11	2,18E-13	-2,63E-11
NHWD	[kg]	1,32E-01	5,51E-07	3,51E-06	1,14E-04	5,00E-02	-2,07E-02
RWD	[kg]	7,18E-05	6,76E-09	4,30E-08	8,02E-05	1,14E-07	1,83E-04
CRU	[kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MFR	[kg]	9,72E-01	0,00E+00	0,00E+00	9,50E-01	0,00E+00	0,00E+00
MER	[kg]	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
EET	[MJ]	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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