

This appendix refers to the EPD MD-24033_EN_rev1. 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.

RT406 DE-RF BS

ENVIRONMENTAL IMPACTS PER TONNES RT406 DE-RF BS										
Parameter	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
GWP	[kg CO ₂ eq.]	1,17E+02	5,24E+00	3,19E+00	0,00E+00	0,00E+00	7,35E+00	3,44E+00	5,41E-02	-5,40E+00
OPD	[kg CFC 11 eq.]	5,83E-06	9,43E-08	1,32E-08	0,00E+00	0,00E+00	1,32E-07	4,48E-08	1,53E-09	-9,36E-08
AP	[kg SO ₂ eq.]	7,38E-01	1,57E-02	2,67E-03	0,00E+00	0,00E+00	2,14E-02	2,96E-02	3,24E-04	-3,26E-02
EP	[kg SO ₄ ³⁻ eq.]	8,91E-02	3,43E-03	8,22E-04	0,00E+00	0,00E+00	4,68E-03	5,41E-03	6,22E-05	-1,13E-02
POCP	[kg ethene-eq.]	1,45E-02	8,24E-04	1,14E-04	0,00E+00	0,00E+00	1,15E-03	6,21E-04	1,41E-05	-2,32E-03
ADPE	[kg Sb-eq.]	5,87E-04	1,42E-05	1,50E-06	0,00E+00	0,00E+00	2,37E-05	1,21E-06	5,79E-08	-5,51E-05
ADPF	[MJ]	1,31E+03	7,54E+01	9,99E+00	0,00E+00	0,00E+00	1,02E+02	4,50E+01	1,37E+00	-5,92E+01
Caption	GWP = Global warming potential; OPD = 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									
	The numbers are declared in scientific notation, e.g. 1,95E+02. This number can also be written as: 1,95*10 ² or 195, while 1,12E-11 is the same as 1,12*10 ⁻¹¹ or 0,0000000000112.									

RESOURCE USE PER TONNES										
Parameter	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
PERE	[MJ]	3,16E+02	1,13E+00	2,26E-01	0,00E+00	0,00E+00	1,62E+00	2,57E-01	2,77E-02	-3,64E+01
PERM	[MJ]	2,53E+01	0,00E+00	-2,53E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	[MJ]	3,42E+02	1,13E+00	-2,50E+01	0,00E+00	0,00E+00	1,62E+00	2,57E-01	2,77E-02	-3,64E+01
PENRE	[MJ]	3,87E+02	7,71E+01	1,03E+01	0,00E+00	0,00E+00	1,05E+02	4,53E+01	1,40E+00	-6,92E+01
PENRM	[MJ]	3,29E+01	0,00E+00	-3,29E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	[MJ]	4,20E+02	7,71E+01	-2,26E+01	0,00E+00	0,00E+00	1,05E+02	4,53E+01	1,40E+00	-6,92E+01
SM	[kg]	1,59E+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]	4,81E+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
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 ³]	5,65E-01	1,21E-02	7,06E-03	0,00E+00	0,00E+00	1,49E-02	3,55E-03	1,63E-03	-3,62E-01
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									
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: 1,95*10 ² or 195, while 1,12E-11 is the same as 1,12*10 ⁻¹¹ or 0,0000000000112.									

WASTE CATEGORIES AND OUTPUT FLOWS PER TONNES										
Parameter	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
HWD	[kg]	6,78E-03	4,79E-04	6,05E-05	0,00E+00	0,00E+00	6,67E-04	3,04E-04	6,81E-06	-3,75E-04
NHWD	[kg]	1,52E+01	6,74E+00	3,30E+01	0,00E+00	0,00E+00	5,10E+00	6,48E-02	9,69E+00	-9,35E-01
RWD	[kg]	4,21E-04	2,35E-05	4,55E-06	0,00E+00	0,00E+00	3,40E-05	4,96E-06	3,02E-07	-1,55E-04

CRU	[kg]	9,20E-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]	6,70E+01	0,00E+00	6,57E-01	0,00E+00	0,00E+00	0,00E+00	9,60E+02	0,00E+00	0,00E+00
MER	[kg]	1,94E-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]	0,00E+00	0,00E+00	1,03E+01	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									
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: 1,95*10 ² or 195, while 1,12E-11 is the same as 1,12*10 ⁻¹¹ or 0,0000000000112.									

RT307 DE-RF BS

ENVIRONMENTAL IMPACTS PER TONNES RT307 DE-RF BS										
Parameter	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
GWP	[kg CO ₂ eq.]	1,18E+02	5,24E+00	3,19E+00	0,00E+00	0,00E+00	7,35E+00	3,44E+00	5,41E-02	-5,40E+00
OPD	[kg CFC 11 eq.]	5,84E-06	9,43E-08	1,32E-08	0,00E+00	0,00E+00	1,32E-07	4,48E-08	1,53E-09	-9,36E-08
AP	[kg SO ₂ eq.]	7,39E-01	1,57E-02	2,67E-03	0,00E+00	0,00E+00	2,14E-02	2,96E-02	3,24E-04	-3,26E-02
EP	[kg SO ₄ ³⁻ eq.]	8,95E-02	3,43E-03	8,22E-04	0,00E+00	0,00E+00	4,68E-03	5,41E-03	6,22E-05	-1,13E-02
POCP	[kg ethene-eq.]	1,46E-02	8,24E-04	1,14E-04	0,00E+00	0,00E+00	1,15E-03	6,21E-04	1,41E-05	-2,32E-03
ADPE	[kg Sb-eq.]	5,89E-04	1,42E-05	1,50E-06	0,00E+00	0,00E+00	2,37E-05	1,21E-06	5,79E-08	-5,51E-05
ADPF	[MJ]	1,32E+03	7,54E+01	9,99E+00	0,00E+00	0,00E+00	1,02E+02	4,50E+01	1,37E+00	-5,92E+01
Caption	GWP = Global warming potential; OPD = 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									
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RESOURCE USE PER TONNES										
Parameter	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
PERE	[MJ]	3,17E+02	1,13E+00	2,26E-01	0,00E+00	0,00E+00	1,62E+00	2,57E-01	2,77E-02	-3,64E+01
PERM	[MJ]	2,53E+01	0,00E+00	-2,53E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	[MJ]	3,42E+02	1,13E+00	-2,50E+01	0,00E+00	0,00E+00	1,62E+00	2,57E-01	2,77E-02	-3,64E+01
PENRE	[MJ]	3,93E+02	7,71E+01	1,03E+01	0,00E+00	0,00E+00	1,05E+02	4,53E+01	1,40E+00	-6,92E+01
PENRM	[MJ]	3,29E+01	0,00E+00	-3,29E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	[MJ]	4,26E+02	7,71E+01	-2,26E+01	0,00E+00	0,00E+00	1,05E+02	4,53E+01	1,40E+00	-6,92E+01
SM	[kg]	1,59E+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]	4,81E+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
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 ³]	6,73E-01	1,21E-02	7,06E-03	0,00E+00	0,00E+00	1,49E-02	3,55E-03	1,63E-03	-3,62E-01
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									
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WASTE CATEGORIES AND OUTPUT FLOWS PER TONNES										
Parameter	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
HWD	[kg]	6,82E-03	4,79E-04	6,05E-05	0,00E+00	0,00E+00	6,67E-04	3,04E-04	6,81E-06	-3,75E-04
NHWD	[kg]	1,55E+01	6,74E+00	3,30E+01	0,00E+00	0,00E+00	5,10E+00	6,48E-02	9,69E+00	-9,35E-01
RWD	[kg]	4,32E-04	2,35E-05	4,55E-06	0,00E+00	0,00E+00	3,40E-05	4,96E-06	3,02E-07	-1,55E-04

CRU	[kg]	9,20E-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]	6,70E+01	0,00E+00	6,57E-01	0,00E+00	0,00E+00	0,00E+00	9,60E+02	0,00E+00	0,00E+00
MER	[kg]	1,94E-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]	0,00E+00	0,00E+00	1,03E+01	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									
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RT307 DE-NF BS

ENVIRONMENTAL IMPACTS PER TONNES RT307 DE-NF BS										
Parameter	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
GWP	[kg CO ₂ eq.]	1,18E+02	5,24E+00	3,19E+00	0,00E+00	0,00E+00	7,35E+00	3,44E+00	5,41E-02	-5,40E+00
OPD	[kg CFC 11 eq.]	5,84E-06	9,43E-08	1,32E-08	0,00E+00	0,00E+00	1,32E-07	4,48E-08	1,53E-09	-9,36E-08
AP	[kg SO ₂ eq.]	7,40E-01	1,57E-02	2,68E-03	0,00E+00	0,00E+00	2,14E-02	2,96E-02	3,24E-04	-3,26E-02
EP	[kg SO ₄ ³⁻ eq.]	8,97E-02	3,43E-03	8,23E-04	0,00E+00	0,00E+00	4,68E-03	5,41E-03	6,22E-05	-1,13E-02
POCP	[kg ethene-eq.]	1,46E-02	8,24E-04	1,14E-04	0,00E+00	0,00E+00	1,15E-03	6,21E-04	1,41E-05	-2,32E-03
ADPE	[kg Sb-eq.]	5,90E-04	1,42E-05	1,50E-06	0,00E+00	0,00E+00	2,37E-05	1,21E-06	5,79E-08	-5,51E-05
ADPF	[MJ]	1,32E+03	7,54E+01	1,00E+01	0,00E+00	0,00E+00	1,02E+02	4,50E+01	1,37E+00	-5,92E+01
Caption	GWP = Global warming potential; OPD = 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									
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RESOURCE USE PER TONNES										
Parameter	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
PERE	[MJ]	3,18E+02	1,13E+00	2,27E-01	0,00E+00	0,00E+00	1,62E+00	2,57E-01	2,77E-02	-3,64E+01
PERM	[MJ]	2,54E+01	0,00E+00	-2,54E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	[MJ]	3,43E+02	1,13E+00	-2,52E+01	0,00E+00	0,00E+00	1,62E+00	2,57E-01	2,77E-02	-3,64E+01
PENRE	[MJ]	3,96E+02	7,71E+01	1,03E+01	0,00E+00	0,00E+00	1,05E+02	4,53E+01	1,40E+00	-6,92E+01
PENRM	[MJ]	3,29E+01	0,00E+00	-3,29E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	[MJ]	4,29E+02	7,71E+01	-2,26E+01	0,00E+00	0,00E+00	1,05E+02	4,53E+01	1,40E+00	-6,92E+01
SM	[kg]	1,59E+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]	4,68E+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
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 ³]	7,22E-01	1,21E-02	7,06E-03	0,00E+00	0,00E+00	1,49E-02	3,55E-03	1,63E-03	-3,62E-01
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WASTE CATEGORIES AND OUTPUT FLOWS PER TONNES										
Parameter	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
HWD	[kg]	6,83E-03	4,79E-04	6,05E-05	0,00E+00	0,00E+00	6,67E-04	3,04E-04	6,81E-06	-3,75E-04
NHWD	[kg]	1,57E+01	6,74E+00	3,30E+01	0,00E+00	0,00E+00	5,10E+00	6,48E-02	9,69E+00	-9,35E-01
RWD	[kg]	4,37E-04	2,35E-05	4,56E-06	0,00E+00	0,00E+00	3,40E-05	4,96E-06	3,02E-07	-1,55E-04

CRU	[kg]	9,20E-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]	6,70E+01	0,00E+00	6,63E-01	0,00E+00	0,00E+00	0,00E+00	9,60E+02	0,00E+00	0,00E+00
MER	[kg]	1,94E-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]	0,00E+00	0,00E+00	1,04E+01	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									
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Checked and approved by



Mirko Miseljic, FORCE Technology Denmark
Third party verifier of MD-24033_EN_rev1



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