

This appendix refers to the EPD >MD-22018-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.

## Thermozell TZ 400

ENVIRONMENTAL IMPACTS PER [1 cubic meter (m3) Thermozell TZ 400]									
Parameter	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
GWP	[kg CO <sub>2</sub> -eq.]	1,89E+02	1,43E+00	3,70E+00	2,13E-01	2,60E+00	5,29E-01	5,04E-01	-1,52E+00
ODP	[kg CFC11-eq.]	3,47E-07	3,13E-16	1,33E-09	5,73E-17	6,95E-16	1,43E-16	2,75E-15	-2,30E-14
AP	[kg SO <sub>2</sub> -eq.]	2,81E-01	1,28E-02	3,07E-03	7,59E-04	5,89E-03	1,60E-03	3,01E-03	-3,85E-03
EP	[kg PO <sub>4</sub> <sup>3-</sup> -eq.]	5,02E-02	2,32E-03	6,81E-04	1,79E-04	1,41E-03	3,88E-04	3,41E-04	-7,67E-04
POCP	[kg ethene-eq.]	3,32E-02	-1,60E-04	3,55E-04	7,38E-05	-2,04E-03	2,04E-04	2,31E-04	-3,80E-04
ADPE	[kg Sb-eq.]	3,26E-05	9,67E-08	1,84E-07	1,93E-08	2,35E-07	4,82E-08	5,06E-08	-2,90E-07
ADPF	[MJ]	8,37E+02	1,85E+01	1,19E+01	2,87E+00	3,48E+01	7,16E+00	6,84E+00	-2,08E+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								

RESOURCE USE PER [1 cubic meter (m3) Thermozell TZ 400]									
Parameter	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
PERE	[MJ]	1,18E+02	7,16E-01	1,02E+00	1,67E-01	2,02E+00	4,16E-01	9,50E-01	-1,08E+01
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
PERT	[MJ]	1,18E+02	7,16E-01	1,02E+00	1,67E-01	2,02E+00	4,16E-01	9,50E-01	-1,08E+01
PENRE	[MJ]	9,07E+02	1,87E+01	1,29E+01	2,91E+00	3,53E+01	7,26E+00	7,05E+00	-2,33E+01
PENRM	[MJ]	8,47E+02	0,00E+00	2,69E+00	0,00E+00	0,00E+00	-7,33E+02	0,00E+00	0,00E+00
PENRT	[MJ]	1,75E+03	1,87E+01	1,56E+01	2,91E+00	3,53E+01	-7,25E+02	7,05E+00	-2,33E+01
SM	[kg]	2,00E+01	0,00E+00	7,63E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	[MJ]	0	0	0	0	0	0	0	0
NRSF	[MJ]	0	0	0	0	0	0	0	0
FW	[m <sup>3</sup> ]	2,72E-01	8,31E-04	1,32E-01	1,91E-04	2,32E-03	4,77E-04	1,74E-03	-6,08E-03
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 [1 cubic meter (m3) Thermozell TZ 400]									
Parameter	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
HWD	[kg]	7,47E-08	6,89E-10	8,07E-10	1,53E-10	1,86E-09	3,83E-10	7,49E-10	-6,14E-08
NHWD	[kg]	1,14E+00	2,56E-03	5,07E-02	4,57E-04	5,54E-03	1,14E-03	3,52E+01	-8,45E-01
RWD	[kg]	3,62E-02	2,93E-05	1,74E-04	5,28E-06	6,40E-05	1,32E-05	7,40E-05	-2,65E-02
CRU	[kg]	0	0	0	0	0	0	0	0
MFR	[kg]	0,00E+00	0,00E+00	1,20E+00	0,00E+00	0,00E+00	3,15E+02	0,00E+00	0,00E+00
MER	[kg]	0	0	0	0	0	0	0	0
EEE	[MJ]	0,00E+00	0,00E+00	5,01E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EET	[MJ]	0,00E+00	0,00E+00	8,91E+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								

Thermozell TZ 600

ENVIRONMENTAL IMPACTS PER [1 cubic meter (m3) Thermozell TZ 600]									
Parameter	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
GWP	[kg CO <sub>2</sub> -eq.]	2,81E+02	1,88E+00	4,17E+00	3,04E-01	3,71E+00	5,29E-01	7,20E-01	-1,80E+00
ODP	[kg CFC11-eq.]	3,47E-07	4,00E-16	1,45E-09	8,19E-17	9,94E-16	1,43E-16	3,93E-15	-2,67E-14
AP	[kg SO <sub>2</sub> -eq.]	4,12E-01	1,85E-02	3,76E-03	1,08E-03	8,42E-03	1,60E-03	4,30E-03	-5,29E-03
EP	[kg PO <sub>4</sub> <sup>3-</sup> -eq.]	7,02E-02	3,30E-03	7,99E-04	2,56E-04	2,02E-03	3,88E-04	4,88E-04	-1,05E-03
POCP	[kg ethene-eq.]	4,79E-02	1,90E-05	4,20E-04	1,05E-04	-2,91E-03	2,04E-04	3,30E-04	-5,16E-04
ADPE	[kg Sb-eq.]	3,52E-05	1,22E-07	2,09E-07	2,76E-08	3,35E-07	4,82E-08	7,23E-08	-3,43E-07
ADPF	[MJ]	1,16E+03	2,43E+01	1,38E+01	4,10E+00	4,98E+01	7,16E+00	9,78E+00	-2,43E+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								

RESOURCE USE PER [1 cubic meter (m3) Thermozell TZ 600]									
Parameter	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
PERE	[MJ]	1,75E+02	8,72E-01	1,32E+00	2,38E-01	2,89E+00	4,16E-01	1,36E+00	-1,19E+01
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
PERT	[MJ]	1,75E+02	8,72E-01	1,32E+00	2,38E-01	2,89E+00	4,16E-01	1,36E+00	-1,19E+01
PENRE	[MJ]	1,28E+03	2,45E+01	1,54E+01	4,16E+00	5,05E+01	7,26E+00	1,01E+01	-2,76E+01
PENRM	[MJ]	8,47E+02	0,00E+00	2,69E+00	0,00E+00	0,00E+00	-7,33E+02	0,00E+00	0,00E+00
PENRT	[MJ]	2,13E+03	2,45E+01	1,81E+01	4,16E+00	5,05E+01	-7,25E+02	1,01E+01	-2,76E+01
SM	[kg]	2,00E+01	0,00E+00	8,34E-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	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
FW	[m <sup>3</sup> ]	3,48E-01	1,01E-03	2,33E-01	2,73E-04	3,31E-03	4,77E-04	2,49E-03	-7,27E-03
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 [1 cubic meter (m3) Thermozell TZ 600]									
Parameter	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
HWD	[kg]	1,11E-07	8,47E-10	1,01E-09	2,19E-10	2,66E-09	3,83E-10	1,07E-09	-9,34E-08
NHWD	[kg]	1,71E+00	3,29E-03	8,20E-02	6,52E-04	7,92E-03	1,14E-03	5,03E+01	-1,36E+00
RWD	[kg]	5,40E-02	3,75E-05	2,66E-04	7,54E-06	9,15E-05	1,32E-05	1,06E-04	-4,26E-02
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
MFR	[kg]	0,00E+00	0,00E+00	1,88E+00	0,00E+00	0,00E+00	4,50E+02	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	0,00E+00	0,00E+00
EEE	[MJ]	0,00E+00	0,00E+00	5,01E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EET	[MJ]	0,00E+00	0,00E+00	8,91E+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



Charlotte Merlin, FORCE Technology  
Third party verifier of MD-22018-EN



Martha Katrine Sørensen  
EPD Danmark