

## Public and verified annex to the EPD document EPD-STO-20200207-CBD1-EN

This annex contains the life cycle assessment results for 1 m<sup>2</sup> StoVentec R (2) mineral plaster based ventilated facade system.

The surface weight of the declared system is 19,504 kg/m<sup>2</sup> at a thickness of 20mm.  
The conversion factor to 1 kg is 0,051276792.

The product composition and information on applied scenarios can be found in the EPD document mentioned above.

### DESCRIPTION OF THE SYSTEM BOUNDARY (X = INCLUDED IN LCA; MND = MODULE NOT DECLARED; MNR = MODULE NOT RELEVANT)

PRODUCT STAGE			CONSTRUCTION PROCESS STAGE		USE STAGE							END OF LIFE STAGE				BENEFITS AND LOADS BEYOND THE SYSTEM BOUNDARIES
Raw material supply	Transport	Manufacturing	Transport from the gate to the site	Assembly	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction 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
X	X	X	X	X	MND	MND	MNR	MNR	MNR	MND	MND	X	X	MND	X	X

### RESULTS OF THE LCA - ENVIRONMENTAL IMPACT according to EN 15804+A1: 1 m<sup>2</sup> StoVentec R (2) ventilated facade system (19,504 kg/m<sup>2</sup>), based on mineral plasters

Parameter	Unit	A1-A3	A4	A5	C1	C2	C4	D
GWP	[kg CO <sub>2</sub> -Eq.]	15.68	0.13	1.77	0.00	0.07	0.27	-0.72
ODP	[kg CFC11-Eq.]	2.47E-11	2.14E-17	1.05E-15	0.00E+0	1.07E-17	1.46E-15	-9.13E-15
AP	[kg SO <sub>2</sub> -Eq.]	3.18E-2	1.03E-4	2.02E-4	0.00E+0	5.13E-5	1.69E-3	-1.26E-3
EP	[kg (PO <sub>4</sub> ) <sup>3-</sup> -Eq.]	4.75E-3	1.89E-5	3.92E-5	0.00E+0	9.44E-6	1.90E-4	-1.28E-4
POCP	[kg ethene-Eq.]	2.96E-3	-4.65E-7	1.72E-5	0.00E+0	-2.32E-7	1.28E-4	-1.02E-4
ADPE	[kg Sb-Eq.]	5.58E-5	9.61E-9	1.14E-8	0.00E+0	4.80E-9	2.68E-8	-3.35E-6
ADPF	[MJ]	268.34	1.78	0.59	0.00	0.89	3.77	-10.00

Caption: GWP = Global warming potential; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential of land and water; EP = Eutrophication potential; POCP = Formation potential of tropospheric ozone photochemical oxidants; ADPE = Abiotic depletion potential for non-fossil resources; ADPF = Abiotic depletion potential for fossil resources

### RESULTS OF THE LCA - INDICATORS TO DESCRIBE RESOURCE USE according to EN 15804+A1: 1 m<sup>2</sup> StoVentec R (2) ventilated facade system (19,504 kg/m<sup>2</sup>), based on mineral plasters

Parameter	Unit	A1-A3	A4	A5	C1	C2	C4	D
PERE	[MJ]	35.28	0.10	9.60	0.00	0.05	1.29	-2.65
PERM	[MJ]	10.11	0.00	-9.33	0.00	0.00	-0.79	0.00
PERT	[MJ]	45.37	0.10	0.27	0.00	0.05	0.51	-2.65
PENRE	[MJ]	257.27	1.78	5.36	0.00	0.89	25.30	-12.10
PENRM	[MJ]	26.04	0.00	-4.54	0.00	0.00	-21.50	0.00
PENRT	[MJ]	282.81	1.78	0.82	0.00	0.89	3.88	-12.10
SM	[kg]	5.11	0.00	0.00	0.00	0.00	0.00	0.00
RSF	[MJ]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NRSF	[MJ]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FW	[m <sup>3</sup> ]	6.01E-2	1.16E-4	4.39E-3	0.00E+0	5.80E-5	9.78E-4	-4.56E-3

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

### RESULTS OF THE LCA - WASTE CATEGORIES AND OUTPUT FLOWS according to EN 15804+A1: 1 m<sup>2</sup> StoVentec R (2) ventilated facade system (19,504 kg/m<sup>2</sup>), based on mineral plasters

Parameter	Unit	A1-A3	A4	A5	C1	C2	C4	D
HWD	[kg]	1.22E-6	8.30E-8	4.35E-10	0.00E+0	4.15E-8	5.91E-8	-1.21E-5
NHWD	[kg]	8.30E-1	2.73E-4	1.18E-2	0.00E+0	1.36E-4	1.95E+1	-5.28E-3
RWD	[kg]	5.77E-3	2.21E-6	9.14E-5	0.00E+0	1.10E-6	4.41E-5	-8.27E-4
CRU	[kg]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MFR	[kg]	0.00	0.00	0.00	0.01	0.00	0.00	0.00
MER	[kg]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EEE	[MJ]	0.00	0.00	2.74	0.00	0.00	0.00	0.00
EET	[MJ]	0.00	0.00	4.91	0.00	0.00	0.00	0.00

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; EEE = Exported thermal energy