

Environmental Profile

This LCA is calculated according to: ISO 14044, ISO 14040 and EN 15804

Ecochain v3.5.80



Product: 3085243 - PVC Vent. Bend 45° BL 195 S/S
 Unit: 1 piece
 Manufacturer: Wavin - NL - Hardenberg - Verified
 Address: J.C. Kellerlaan 3
 7772 SG Hardenberg
 Netherlands

LCA standard: NMD Bepalingsmethode 1.1 (2022)
 Standard database: Worldwide - Ecoinvent v 3.6 Cut-Off
 Externally verified: Yes
 Issue date: 08-06-2023
 End of validity: 08-06-2028
 Verifier: Martijn van Hövell - SGS Search



With the new Ventiza air distribution system, Wavin offers a solution from the ventilation to the valve. A good indoor climate is arranged in no time!

This LCA was evaluated according to EN15804+A2. It was concluded that the LCA complies with this standard.

The LCA background information and project dossier have been registered in the online Ecochain application in the account Wavin - NL - Hardenberg - Verified (2020). (☑ = module declared, MND = module not declared).

A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
☑	☑	☑	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	☑	☑	☑	☑

Product stage

A1 Raw material supply A2 Transport A3 Manufacturing

Construction process stage

A4 Transport gate to site
 A5 Assembly / Construction installation process

Use stage

B1 Use B2 Maintenance B3 Repair B4 Replacement B5 Refurbishment
 B6 Operational energy use B7 Operational water use

End-of-Life stage

C1 De-construction demolition C2 Transport C3 Waste processing
 C4 Disposal

Benefits and loads beyond the system boundaries

D Reuse- Recovery- Recycling- potential

Environmental impacts and parameters

ECI = Environmental Costs Indicator [euro]; **ADPE** = Abiotic depletion potential for non-fossil resources [kg Sb-eq]; **ADPF** = Abiotic depletion potential for fossil resources [kg Sb-eq]; **GWP** = Global warming potential [kg CO2-eq]; **ODP** = Depletion potential of the stratospheric ozone layer [kg CFC-11-eq]; **POCP** = Formation potential of tropospheric ozone photochemical oxidants [kg ethene-eq]; **AP** = Acidification potential of land and water [kg SO2-eq]; **EP** = Eutrophication potential [kg PO4 3--eq]; **HTP** = Human toxicity potential [kg 1,4-DB-eq]; **FAETP** = Freshwater aquatic ecotoxicity potential [kg 1,4-DB-eq]; **MAETP** = Marine aquatic ecotoxicity potential [kg 1,4-DB-eq]; **TETP** = Terrestrial ecotoxicity potential [kg 1,4-DB-eq]; **GWP-total** = EF EN15804+A2 Climate Change [kg CO2 eq]; **GWP-f** = EF Climate change - Fossil [kg CO2 eq]; **GWP-b** = EF EN15804+A2 Climate Change - Biogenic [kg CO2 eq]; **GWP-luluc** = EF EN15804+A2 Climate Change - Land use and LU change [kg CO2 eq]; **ODP** = EF Ozone depletion [kg CFC11 eq]; **AP** = EF Acidification [mol H+ eq]; **EP-fw** = EF Eutrophication, freshwater [kg P eq]; **EP-m** = EF Eutrophication, marine [kg N eq]; **EP-T** = EF Eutrophication, terrestrial [mol N eq]; **POCP** = EF Photochemical ozone formation [kg NMVOC eq]; **ADP-mm** = EF Resource use, minerals and metals [kg Sb eq]; **ADP-f** = EF Resource use, fossils [MJ]; **WDP** = EF Water use [m3 depriv.]; **PM** = EF Particulate matter [disease inc.]; **IR** = EF Ionising radiation [kBq U-235 eq]; **ETP-fw** = EF Ecotoxicity, freshwater [CTUe]; **HTP-c** = EF Human toxicity, cancer [CTUh]; **HTP-nc** = EF Human toxicity, non-cancer [CTUh]; **SQP** = EF Land use [Pt]; **PERE** = Use of renewable primary energy excluding non-renewable primary energy resources used as raw materials [MJ]; **PERM** = Use of renewable primary energy resources used as raw materials [MJ]; **PERT** = Total use of renewable primary energy resources [MJ]; **PENRE** = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials [MJ]; **PENRM** = Use of non-renewable primary energy resources used as raw materials [MJ]; **PENRT** = Total use of non-renewable primary energy resources [MJ]; **PET** = Total energy [MJ]; **SM** = Use of secondary material [kg]; **RSF** = Use of renewable secondary fuels [MJ]; **NRSF** = Use of non-renewable secondary fuels [MJ]; **FW** = Use of net fresh water [m3]; **HWD** = Hazardous waste disposed [kg]; **NHWD** = Non-hazardous waste disposed [kg]; **RWD** = Radioactive waste disposed [kg]; **CRU** = Components for re-use [kg]; **MFR** = Materials for recycling [kg]; **MER** = Materials for energy recovery [kg]; **EE** = Exported energy [MJ]; **EET** = Exported energy thermic [MJ]; **EEE** = Exported energy electric [MJ]

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Results

Environmental impact SBK set 1	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
ECI	euro	0.1	0	0.01	0.11	0	0.03	0	-0.05	0.09
ADPE	kg Sb-eq	8.99E-4	3.05E-7	1.47E-6	9.00E-4	2.79E-7	2.57E-6	3.12E-9	-9.83E-6	8.93E-4
ADPF	kg Sb-eq	1.04E-2	8.77E-5	2.52E-4	1.08E-2	7.84E-5	8.80E-4	4.31E-6	-5.55E-3	6.17E-3
GWP	kg CO2-eq	9.09E-1	1.19E-2	4.78E-2	9.69E-1	1.07E-2	2.99E-1	2.95E-3	-4.81E-1	8.01E-1
ODP	kg CFC-11-eq	4.55E-7	2.12E-9	3.78E-9	4.61E-7	1.98E-9	3.66E-8	1.03E-10	-2.37E-7	2.62E-7
POCP	kg ethene-eq	5.54E-4	7.20E-6	2.08E-5	5.82E-4	6.41E-6	7.07E-5	7.64E-7	-2.55E-4	4.05E-4
AP	kg SO2-eq	3.73E-3	5.24E-5	2.05E-4	3.99E-3	4.60E-5	5.16E-4	2.32E-6	-1.69E-3	2.86E-3
EP	kg PO4 3--eq	4.84E-4	1.03E-5	2.64E-5	5.21E-4	9.18E-6	7.88E-5	9.14E-7	-2.42E-4	3.68E-4
HTP	kg 1,4-DB-eq	3.28E-1	5.02E-3	2.22E-2	3.56E-1	4.57E-3	1.34E-1	2.44E-4	-1.59E-1	3.36E-1
FAETP	kg 1,4-DB-eq	1.08E-2	1.47E-4	7.58E-4	1.17E-2	1.34E-4	2.05E-3	7.70E-5	-4.98E-3	8.99E-3
MAETP	kg 1,4-DB-eq	2.35E+1	5.27E-1	2.99E+0	2.70E+1	4.78E-1	7.18E+0	9.38E-2	-1.03E+1	2.45E+1
TETP	kg 1,4-DB-eq	2.46E-3	1.77E-5	1.65E-3	4.12E-3	1.62E-5	4.74E-4	8.18E-7	-1.67E-3	2.95E-3
Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	9.41E-1	1.20E-2	5.47E-2	1.01E+0	1.08E-2	3.30E-1	3.44E-3	-4.28E-1	9.24E-1
GWP-f	kg CO2 eq	9.31E-1	1.20E-2	4.20E-2	9.85E-1	1.08E-2	3.01E-1	3.44E-3	-4.91E-1	8.09E-1
GWP-b	kg CO2 eq	9.02E-3	5.55E-6	8.67E-3	1.77E-2	6.54E-6	2.89E-2	4.32E-6	6.36E-2	1.10E-1
GWP-luluc	kg CO2 eq	1.09E-3	4.41E-6	3.99E-3	5.08E-3	3.81E-6	1.36E-4	9.02E-8	-7.63E-4	4.46E-3
ODP	kg CFC11 eq	4.49E-7	2.65E-9	4.44E-9	4.56E-7	2.48E-9	3.78E-8	1.28E-10	-2.35E-7	2.62E-7
AP	mol H+ eq	4.54E-3	6.98E-5	2.56E-4	4.87E-3	6.13E-5	6.48E-4	3.11E-6	-2.05E-3	3.53E-3
EP-fw	kg P eq	4.43E-5	1.21E-7	7.36E-7	4.52E-5	8.86E-8	4.56E-6	4.07E-9	-2.27E-5	2.71E-5
EP-m	kg N eq	8.36E-4	2.46E-5	6.05E-5	9.21E-4	2.19E-5	1.60E-4	1.92E-6	-3.72E-4	7.33E-4
EP-T	mol N eq	8.70E-3	2.71E-4	6.67E-4	9.64E-3	2.42E-4	1.76E-3	1.24E-5	-4.03E-3	7.63E-3
POCP	kg NMVOC eq	2.84E-3	7.74E-5	1.90E-4	3.11E-3	6.91E-5	5.28E-4	4.26E-6	-1.32E-3	2.39E-3
ADP-mm	kg Sb eq	8.99E-4	3.05E-7	1.47E-6	9.00E-4	2.79E-7	2.57E-6	3.12E-9	-9.83E-6	8.93E-4
ADP-f	MJ	2.21E+1	1.81E-1	4.70E-1	2.28E+1	1.65E-1	1.74E+0	9.32E-3	-1.17E+1	1.30E+1
WDP	m3 depriv.	1.38E+0	6.49E-4	3.64E-1	1.75E+0	5.07E-4	6.82E-2	6.21E-5	-7.58E-1	1.06E+0
PM	disease inc.	3.22E-8	1.08E-9	3.16E-9	3.65E-8	9.72E-10	8.06E-9	6.41E-11	-1.73E-8	2.83E-8
IR	kBq U-235 eq	4.83E-2	7.60E-4	7.47E-4	4.98E-2	7.22E-4	6.19E-3	4.28E-5	-2.55E-2	3.13E-2
ETP-fw	CTUe	2.94E+1	1.62E-1	1.09E+0	3.06E+1	1.34E-1	1.34E+1	1.47E-1	-1.14E+1	3.29E+1
HTP-c	CTUh	7.21E-10	5.25E-12	3.78E-11	7.64E-10	4.78E-12	1.96E-10	2.58E-13	-2.81E-10	6.84E-10
HTP-nc	CTUh	2.36E-8	1.77E-10	1.18E-9	2.50E-8	1.60E-10	4.67E-9	2.83E-11	-9.71E-9	2.01E-8
SQP	Pt	5.39E+0	1.57E-1	3.51E-2	5.58E+0	1.41E-1	1.06E+0	2.39E-2	-1.32E+1	-6.35E+0

Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.59E+0	2.27E-3	2.28E+0	3.88E+0	2.37E-3	1.25E-1	3.47E-4	-2.65E+0	1.35E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.59E+0	2.27E-3	2.28E+0	3.88E+0	2.37E-3	1.25E-1	3.47E-4	-2.65E+0	1.35E+0
PENRE	MJ	2.37E+1	1.93E-1	5.08E-1	2.44E+1	1.75E-1	1.85E+0	9.89E-3	-1.26E+1	1.39E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.37E+1	1.93E-1	5.08E-1	2.44E+1	1.75E-1	1.85E+0	9.89E-3	-1.26E+1	1.39E+1
PET	MJ	2.53E+1	1.95E-1	2.79E+0	2.83E+1	1.78E-1	1.98E+0	1.02E-2	-1.53E+1	1.52E+1
SM	kg	0	0	0	0	0	0	0	0	0
RSF	MJ	0	0	0	0	0	0	0	0	0
NRSF	MJ	0	0	0	0	0	0	0	0	0
FW	m3	1.60E-2	2.21E-5	8.59E-3	2.46E-2	1.87E-5	1.87E-3	1.14E-5	-9.42E-3	1.71E-2
Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.28E-4	4.60E-7	4.99E-7	1.29E-4	4.23E-7	2.87E-6	1.14E-8	-1.00E-5	1.23E-4
NHWD	kg	9.21E-2	1.15E-2	7.70E-4	1.04E-1	1.02E-2	6.30E-2	4.09E-2	-4.05E-2	1.78E-1
RWD	kg	4.21E-5	1.19E-6	9.25E-7	4.43E-5	1.12E-6	6.67E-6	6.06E-8	-2.27E-5	2.94E-5
CRU	kg	0	0	0	0	0	0	0	0	0
MFR	kg	0	0	0	0	0	0	0	0	0
MER	kg	0	0	0	0	0	0	0	0	0
EE	MJ	0	0	0	0	0	0	0	0	0
EET	MJ	0	0	0	0	0	0	0	0	0
EEE	MJ	0	0	0	0	0	0	0	0	0



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