Environmental Profile

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

Ecochain v3.5.80

Product:	3085260 - PVC Vent.T-piece BL 195x125 H=100 3S
Unit:	1 piece
Manufacturer:	Wavin - NL - Hardenberg - Verified
Address:	J.C. Kellerlaan 3 7772 SG Hardenberg Netherlands

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!

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

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 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]

Statement of Confidentiality

Results

Environmental impact SBK set 1	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
ECI	euro	0.14	0	0.01	0.15	0	0.04	0	-0.07	0.13
ADPE	kg Sb-eq	1.29E-3	4.37E-7	2.18E-6	1.29E-3	4.00E-7	3.69E-6	4.48E-9	-1.41E-5	1.28E-3
ADPF	kg Sb-eq	1.50E-2	1.26E-4	3.75E-4	1.55E-2	1.13E-4	1.26E-3	6.20E-6	-7.97E-3	8.87E-3
GWP	kg CO2-eq	1.30E+0	1.71E-2	7.11E-2	1.39E+0	1.54E-2	4.30E-1	4.24E-3	-6.90E-1	1.15E+0
ODP	kg CFC-11-eq	6.54E-7	3.03E-9	5.62E-9	6.63E-7	2.85E-9	5.27E-8	1.48E-10	-3.41E-7	3.77E-7
POCP	kg ethene-eq	7.96E-4	1.03E-5	3.09E-5	8.37E-4	9.21E-6	1.01E-4	1.10E-6	-3.66E-4	5.83E-4
AP	kg SO2-eq	5.36E-3	7.52E-5	3.06E-4	5.74E-3	6.61E-5	7.41E-4	3.34E-6	-2.42E-3	4.13E-3
EP	kg PO4 3−-eq	6.94E-4	1.48E-5	3.93E-5	7.48E-4	1.32E-5	1.13E-4	1.31E-6	-3.46E-4	5.30E-4
HTP	kg 1,4-DB-eq	4.72E-1	7.20E-3	3.31E-2	5.12E-1	6.57E-3	1.93E-1	3.51E-4	-2.28E-1	4.84E-1
FAETP	kg 1,4-DB-eq	1.55E-2	2.10E-4	1.13E-3	1.68E-2	1.92E-4	2.95E-3	1.11E-4	-7.10E-3	1.29E-2
MAETP	kg 1,4-DB-eq	3.37E+1	7.56E-1	4.45E+0	3.89E+1	6.87E-1	1.03E+1	1.35E-1	-1.48E+1	3.53E+1
TETP	kg 1,4-DB-eq	3.52E-3	2.55E-5	2.46E-3	6.01E-3	2.33E-5	6.81E-4	1.18E-6	-2.37E-3	4.34E-3
Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	1.35E+0	1.73E-2	8.14E-2	1.45E+0	1.55E-2	4.74E-1	4.94E-3	-6.17E-1	1.33E+0
GWP-f	kg CO2 eq	1.34E+0	1.72E-2	6.26E-2	1.42E+0	1.55E-2	4.33E-1	4.94E-3	-7.05E-1	1.16E+0
GWP-b	kg CO2 eq	1.29E-2	7.96E-6	1.29E-2	2.59E-2	9.40E-6	4.06E-2	6.21E-6	8.92E-2	1.56E-1
GWP-luluc	kg CO2 eq	1.55E-3	6.32E-6	5.94E-3	7.50E-3	5.48E-6	1.95E-4	1.30E-7	-1.08E-3	6.62E-3
ODP	kg CFC11 eq	6.46E-7	3.81E-9	6.61E-9	6.56E-7	3.57E-9	5.43E-8	1.83E-10	-3.38E-7	3.76E-7
AP	mol H+ eq	6.52E-3	1.00E-4	3.81E-4	7.00E-3	8.82E-5	9.31E-4	4.46E-6	-2.94E-3	5.09E-3
EP-fw	kg P eq	6.36E-5	1.74E-7	1.10E-6	6.48E-5	1.27E-7	6.55E-6	5.86E-9	-3.25E-5	3.90E-5
EP-m	kg N eq	1.20E-3	3.53E-5	9.01E-5	1.32E-3	3.15E-5	2.30E-4	2.76E-6	-5.33E-4	1.05E-3
EP-T	mol N eq	1.25E-2	3.89E-4	9.94E-4	1.39E-2	3.48E-4	2.53E-3	1.78E-5	-5.76E-3	1.10E-2
POCP	kg NMVOC eq	4.07E-3	1.11E-4	2.83E-4	4.47E-3	9.94E-5	7.57E-4	6.13E-6	-1.89E-3	3.44E-3
ADP-mm	kg Sb eq	1.29E-3	4.37E-7	2.18E-6	1.29E-3	4.00E-7	3.69E-6	4.48E-9	-1.41E-5	1.28E-3
ADP-f	MJ	3.18E+1	2.60E-1	6.99E-1	3.27E+1	2.38E-1	2.50E+0	1.34E-2	-1.68E+1	1.87E+1
WDP	m3 depriv.	1.99E+0	9.31E-4	5.41E-1	2.53E+0	7.29E-4	9.80E-2	8.92E-5	-1.09E+0	1.54E+0
PM	disease inc.	4.62E-8	1.55E-9	4.71E-9	5.24E-8	1.40E-9	1.16E-8	9.22E-11	-2.46E-8	4.08E-8
IR	kBq U-235 eq	6.94E-2	1.09E-3	1.11E-3	7.16E-2	1.04E-3	8.88E-3	6.15E-5	-3.65E-2	4.51E-2
ETP-fw	CTUe	4.20E+1	2.32E-1	1.62E+0	4.38E+1	1.93E-1	1.92E+1	2.12E-1	-1.62E+1	4.72E+1
HTP-c	CTUh	1.04E-9	7.52E-12	5.62E-11	1.10E-9	6.87E-12	2.81E-10	3.72E-13	-4.03E-10	9.85E-10
HTP-nc	CTUh	3.40E-8	2.54E-10	1.76E-9	3.60E-8	2.30E-10	6.70E-9	4.06E-11	-1.39E-8	2.90E-8
SQP	Pt	7.66E+0	2.26E-1	5.23E-2	7.94E+0	2.03E-1	1.53E+0	3.43E-2	-1.85E+1	-8.80E+0

Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.27E+0	3.26E-3	3.40E+0	5.67E+0	3.41E-3	1.80E-1	4.99E-4	-3.74E+0	2.12E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.27E+0	3.26E-3	3.40E+0	5.67E+0	3.41E-3	1.80E-1	4.99E-4	-3.74E+0	2.12E+0
PENRE	MJ	3.41E+1	2.76E-1	7.56E-1	3.51E+1	2.52E-1	2.66E+0	1.42E-2	-1.81E+1	2.00E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	3.41E+1	2.76E-1	7.56E-1	3.51E+1	2.52E-1	2.66E+0	1.42E-2	-1.81E+1	2.00E+1
PET	MJ	3.64E+1	2.79E-1	4.16E+0	4.08E+1	2.56E-1	2.84E+0	1.47E-2	-2.19E+1	2.21E+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	2.29E-2	3.17E-5	1.28E-2	3.58E-2	2.69E-5	2.69E-3	1.64E-5	-1.35E-2	2.51E-2
Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.84E-4	6.59E-7	7.43E-7	1.86E-4	6.08E-7	4.12E-6	1.63E-8	-1.43E-5	1.76E-4
NHWD	kg	1.32E-1	1.65E-2	1.15E-3	1.50E-1	1.47E-2	9.05E-2	5.89E-2	-5.80E-2	2.56E-1
RWD	kg	6.05E-5	1.71E-6	1.38E-6	6.36E-5	1.62E-6	9.57E-6	8.71E-8	-3.25E-5	4.23E-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