Environmental Profile

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

Ecochain v3.5.80

Product:	3085267 - PVC Vent. T-piece 88° BL 125 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	0.13	0	0.01	0.14	0	0.04	0	-0.07	0.12
ADPE	kg Sb-eq	1.23E-3	3.98E-7	1.96E-6	1.23E-3	3.80E-7	3.43E-6	4.25E-9	-1.32E-5	1.22E-3
ADPF	kg Sb-eq	1.40E-2	1.15E-4	3.37E-4	1.44E-2	1.07E-4	1.19E-3	5.88E-6	-7.43E-3	8.29E-3
GWP	kg CO2-eq	1.21E+0	1.56E-2	6.40E-2	1.29E+0	1.46E-2	4.06E-1	4.02E-3	-6.37E-1	1.07E+0
ODP	kg CFC-11-eq	6.17E-7	2.76E-9	5.06E-9	6.25E-7	2.70E-9	4.96E-8	1.40E-10	-3.21E-7	3.56E-7
POCP	kg ethene-eq	7.42E-4	9.40E-6	2.78E-5	7.79E-4	8.74E-6	9.37E-5	1.04E-6	-3.33E-4	5.49E-4
AP	kg SO2-eq	4.97E-3	6.85E-5	2.75E-4	5.31E-3	6.27E-5	6.91E-4	3.17E-6	-2.17E-3	3.90E-3
EP	kg PO4 3−-eq	6.23E-4	1.35E-5	3.54E-5	6.72E-4	1.25E-5	1.05E-4	1.25E-6	-2.92E-4	4.98E-4
HTP	kg 1,4-DB-eq	4.37E-1	6.56E-3	2.97E-2	4.73E-1	6.23E-3	1.81E-1	3.33E-4	-2.07E-1	4.54E-1
FAETP	kg 1,4-DB-eq	1.34E-2	1.92E-4	1.02E-3	1.46E-2	1.83E-4	2.75E-3	1.05E-4	-5.77E-3	1.19E-2
MAETP	kg 1,4-DB-eq	3.12E+1	6.89E-1	4.00E+0	3.59E+1	6.52E-1	9.45E+0	1.28E-1	-1.34E+1	3.27E+1
TETP	kg 1,4-DB-eq	3.21E-3	2.32E-5	2.21E-3	5.44E-3	2.21E-5	6.43E-4	1.12E-6	-1.93E-3	4.18E-3
Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	1.25E+0	1.57E-2	7.33E-2	1.34E+0	1.47E-2	4.32E-1	4.69E-3	-6.01E-1	1.19E+0
GWP-f	kg CO2 eq	1.24E+0	1.57E-2	5.63E-2	1.31E+0	1.47E-2	4.09E-1	4.69E-3	-6.51E-1	1.09E+0
GWP-b	kg CO2 eq	1.18E-2	7.25E-6	1.16E-2	2.34E-2	8.92E-6	2.36E-2	5.89E-6	5.07E-2	9.77E-2
GWP-luluc	kg CO2 eq	1.28E-3	5.76E-6	5.34E-3	6.63E-3	5.20E-6	1.85E-4	1.23E-7	-7.89E-4	6.03E-3
ODP	kg CFC11 eq	6.09E-7	3.47E-9	5.95E-9	6.18E-7	3.38E-9	5.11E-8	1.74E-10	-3.18E-7	3.55E-7
AP	mol H+ eq	6.02E-3	9.11E-5	3.43E-4	6.45E-3	8.37E-5	8.67E-4	4.24E-6	-2.63E-3	4.78E-3
EP-fw	kg P eq	5.82E-5	1.59E-7	9.86E-7	5.94E-5	1.21E-7	6.18E-6	5.56E-9	-2.79E-5	3.78E-5
EP-m	kg N eq	1.08E-3	3.21E-5	8.11E-5	1.19E-3	2.99E-5	2.12E-4	2.62E-6	-4.69E-4	9.68E-4
EP-T	mol N eq	1.13E-2	3.54E-4	8.94E-4	1.25E-2	3.30E-4	2.33E-3	1.69E-5	-5.04E-3	1.02E-2
POCP	kg NMVOC eq	3.75E-3	1.01E-4	2.54E-4	4.10E-3	9.43E-5	6.99E-4	5.82E-6	-1.69E-3	3.22E-3
ADP-mm	kg Sb eq	1.23E-3	3.98E-7	1.96E-6	1.23E-3	3.80E-7	3.43E-6	4.25E-9	-1.32E-5	1.22E-3
ADP-f	MJ	2.97E+1	2.37E-1	6.29E-1	3.06E+1	2.25E-1	2.34E+0	1.27E-2	-1.57E+1	1.75E+1
WDP	m3 depriv.	1.87E+0	8.48E-4	4.87E-1	2.36E+0	6.92E-4	9.28E-2	8.47E-5	-9.83E-1	1.47E+0
PM	disease inc.	4.12E-8	1.41E-9	4.24E-9	4.69E-8	1.33E-9	1.07E-8	8.75E-11	-2.02E-8	3.88E-8
IR	kBq U-235 eq	6.44E-2	9.93E-4	1.00E-3	6.64E-2	9.85E-4	8.30E-3	5.84E-5	-3.25E-2	4.32E-2
ETP-fw	CTUe	3.56E+1	2.11E-1	1.46E+0	3.73E+1	1.83E-1	1.82E+1	2.01E-1	-1.28E+1	4.30E+1
HTP-c	CTUh	9.66E-10	6.85E-12	5.06E-11	1.02E-9	6.52E-12	2.62E-10	3.53E-13	-3.62E-10	9.30E-10
HTP-nc	CTUh	3.17E-8	2.31E-10	1.58E-9	3.36E-8	2.18E-10	6.31E-9	3.86E-11	-1.25E-8	2.76E-8
SQP	Pt	5.90E+0	2.06E-1	4.71E-2	6.15E+0	1.93E-1	1.43E+0	3.26E-2	-1.15E+1	-3.66E+0

Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.87E+0	2.97E-3	3.06E+0	4.93E+0	3.23E-3	1.69E-1	4.73E-4	-2.45E+0	2.66E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.87E+0	2.97E-3	3.06E+0	4.93E+0	3.23E-3	1.69E-1	4.73E-4	-2.45E+0	2.66E+0
PENRE	MJ	3.19E+1	2.52E-1	6.80E-1	3.28E+1	2.39E-1	2.49E+0	1.35E-2	-1.69E+1	1.87E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	3.19E+1	2.52E-1	6.80E-1	3.28E+1	2.39E-1	2.49E+0	1.35E-2	-1.69E+1	1.87E+1
PET	MJ	3.38E+1	2.55E-1	3.74E+0	3.78E+1	2.43E-1	2.66E+0	1.40E-2	-1.93E+1	2.14E+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	2.14E-2	2.89E-5	1.15E-2	3.29E-2	2.55E-5	2.54E-3	1.56E-5	-1.15E-2	2.40E-2
Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.74E-4	6.01E-7	6.68E-7	1.76E-4	5.77E-7	3.83E-6	1.55E-8	-1.32E-5	1.67E-4
NHWD	kg	1.19E-1	1.50E-2	1.03E-3	1.36E-1	1.40E-2	8.46E-2	5.59E-2	-5.24E-2	2.38E-1
RWD	kg	5.59E-5	1.56E-6	1.24E-6	5.87E-5	1.53E-6	8.89E-6	8.26E-8	-2.89E-5	4.03E-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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