Environmental Profile

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

Ecochain v3.5.80

Product:	3085332 - PVC Vent. Red.T-piece BL 195x125 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

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Results

Environmental impact SBK set 1	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
ECI	euro	0.22	0	0.02	0.24	0	0.07	0	-0.11	0.2
ADPE	kg Sb-eq	1.76E-3	7.35E-7	4.01E-6	1.77E-3	5.99E-7	5.65E-6	6.67E-9	-2.14E-5	1.75E-3
ADPF	kg Sb-eq	2.27E-2	2.11E-4	6.90E-4	2.36E-2	1.69E-4	1.92E-3	9.23E-6	-1.21E-2	1.36E-2
GWP	kg CO2-eq	2.00E+0	2.88E-2	1.31E-1	2.16E+0	2.30E-2	6.49E-1	6.27E-3	-1.06E+0	1.77E+0
ODP	kg CFC-11-eq	9.79E-7	5.10E-9	1.03E-8	9.94E-7	4.26E-9	7.88E-8	2.20E-10	-5.10E-7	5.68E-7
POCP	kg ethene-eq	1.21E-3	1.73E-5	5.69E-5	1.28E-3	1.38E-5	1.57E-4	1.63E-6	-5.73E-4	8.80E-4
AP	kg SO2-eq	8.14E-3	1.26E-4	5.63E-4	8.83E-3	9.88E-5	1.13E-3	4.96E-6	-3.87E-3	6.19E-3
EP	kg PO4 3−-eq	1.11E-3	2.48E-5	7.23E-5	1.20E-3	1.97E-5	1.74E-4	1.95E-6	-5.95E-4	8.03E-4
HTP	kg 1,4-DB-eq	7.39E-1	1.21E-2	6.08E-2	8.12E-1	9.83E-3	2.93E-1	5.20E-4	-3.59E-1	7.56E-1
FAETP	kg 1,4-DB-eq	2.57E-2	3.53E-4	2.08E-3	2.82E-2	2.88E-4	4.53E-3	1.63E-4	-1.27E-2	2.04E-2
MAETP	kg 1,4-DB-eq	5.21E+1	1.27E+0	8.18E+0	6.15E+1	1.03E+0	1.61E+1	1.99E-1	-2.33E+1	5.55E+1
TETP	kg 1,4-DB-eq	5.54E-3	4.28E-5	4.52E-3	1.01E-2	3.48E-5	1.02E-3	1.74E-6	-4.26E-3	6.90E-3
Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	2.05E+0	2.90E-2	1.50E-1	2.23E+0	2.32E-2	7.60E-1	7.31E-3	-8.78E-1	2.14E+0
GWP-f	kg CO2 eq	2.04E+0	2.90E-2	1.15E-1	2.19E+0	2.32E-2	6.53E-1	7.31E-3	-1.09E+0	1.78E+0
GWP-b	kg CO2 eq	7.19E-3	1.34E-5	2.37E-2	3.09E-2	1.41E-5	1.07E-1	9.18E-6	2.10E-1	3.48E-1
GWP-luluc	kg CO2 eq	2.74E-3	1.06E-5	1.09E-2	1.37E-2	8.20E-6	2.92E-4	1.93E-7	-2.14E-3	1.18E-2
ODP	kg CFC11 eq	9.68E-7	6.40E-9	1.22E-8	9.86E-7	5.34E-9	8.14E-8	2.73E-10	-5.05E-7	5.68E-7
AP	mol H+ eq	9.98E-3	1.68E-4	7.02E-4	1.08E-2	1.32E-4	1.42E-3	6.64E-6	-4.71E-3	7.69E-3
EP-fw	kg P eq	9.85E-5	2.92E-7	2.02E-6	1.01E-4	1.91E-7	9.79E-6	8.71E-9	-5.48E-5	5.60E-5
EP-m	kg N eq	1.89E-3	5.93E-5	1.66E-4	2.12E-3	4.72E-5	3.56E-4	4.09E-6	-8.74E-4	1.65E-3
EP-T	mol N eq	1.97E-2	6.53E-4	1.83E-3	2.22E-2	5.20E-4	3.92E-3	2.65E-5	-9.53E-3	1.71E-2
POCP	kg NMVOC eq	6.28E-3	1.87E-4	5.20E-4	6.98E-3	1.49E-4	1.17E-3	9.11E-6	-3.03E-3	5.28E-3
ADP-mm	kg Sb eq	1.76E-3	7.35E-7	4.01E-6	1.77E-3	5.99E-7	5.65E-6	6.67E-9	-2.14E-5	1.75E-3
ADP-f	MJ	4.81E+1	4.37E-1	1.29E+0	4.99E+1	3.55E-1	3.80E+0	1.99E-2	-2.56E+1	2.84E+1
WDP	m3 depriv.	2.99E+0	1.56E-3	9.96E-1	3.99E+0	1.09E-3	1.46E-1	1.34E-4	-1.72E+0	2.41E+0
PM	disease inc.	7.48E-8	2.60E-9	8.66E-9	8.61E-8	2.09E-9	1.78E-8	1.37E-10	-4.39E-8	6.22E-8
IR	kBq U-235 eq	1.06E-1	1.83E-3	2.04E-3	1.10E-1	1.55E-3	1.35E-2	9.15E-5	-5.87E-2	6.67E-2
ETP-fw	CTUe	7.10E+1	3.90E-1	2.99E+0	7.44E+1	2.89E-1	2.85E+1	3.12E-1	-3.00E+1	7.36E+1
HTP-c	CTUh	1.59E-9	1.26E-11	1.03E-10	1.71E-9	1.03E-11	4.31E-10	5.52E-13	-6.41E-10	1.51E-9
HTP-nc	CTUh	5.07E-8	4.27E-10	3.23E-9	5.44E-8	3.44E-10	1.01E-8	6.00E-11	-2.21E-8	4.27E-8
SQP	Pt	1.57E+1	3.79E-1	9.62E-2	1.62E+1	3.04E-1	2.32E+0	5.10E-2	-4.16E+1	-2.27E+1

Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	4.20E+0	5.47E-3	6.25E+0	1.05E+1	5.10E-3	2.69E-1	7.38E-4	-8.12E+0	2.61E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	4.20E+0	5.47E-3	6.25E+0	1.05E+1	5.10E-3	2.69E-1	7.38E-4	-8.12E+0	2.61E+0
PENRE	MJ	5.17E+1	4.64E-1	1.39E+0	5.35E+1	3.77E-1	4.04E+0	2.12E-2	-2.75E+1	3.04E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	5.17E+1	4.64E-1	1.39E+0	5.35E+1	3.77E-1	4.04E+0	2.12E-2	-2.75E+1	3.04E+1
PET	MJ	5.59E+1	4.70E-1	7.65E+0	6.40E+1	3.82E-1	4.31E+0	2.19E-2	-3.57E+1	3.30E+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	3.54E-2	5.33E-5	2.35E-2	5.90E-2	4.02E-5	4.01E-3	2.44E-5	-2.28E-2	4.03E-2
Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.56E-4	1.11E-6	1.37E-6	2.58E-4	9.09E-7	6.33E-6	2.43E-8	-2.22E-5	2.43E-4
NHWD	kg	2.12E-1	2.77E-2	2.11E-3	2.42E-1	2.20E-2	1.39E-1	8.81E-2	-9.20E-2	3.99E-1
RWD	kg	9.35E-5	2.87E-6	2.53E-6	9.89E-5	2.42E-6	1.47E-5	1.30E-7	-5.27E-5	6.35E-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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