Environmental Profile

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

Ecochain v3.5.80

Product:	3085254 - PVC Vent. Reducer BL 235x195 S/S
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	0.07	0	0	0.08	0	0.02	0	-0.04	0.07
ADPE	kg Sb-eq	6.79E-4	2.23E-7	1.11E-6	6.80E-4	2.10E-7	1.91E-6	2.35E-9	-7.33E-6	6.75E-4
ADPF	kg Sb-eq	7.77E-3	6.41E-5	1.90E-4	8.03E-3	5.92E-5	6.59E-4	3.26E-6	-4.13E-3	4.61E-3
GWP	kg CO2-eq	6.73E-1	8.72E-3	3.61E-2	7.18E-1	8.07E-3	2.25E-1	2.23E-3	-3.55E-1	5.98E-1
ODP	kg CFC-11-eq	3.42E-7	1.55E-9	2.86E-9	3.47E-7	1.50E-9	2.75E-8	7.76E-11	-1.78E-7	1.97E-7
POCP	kg ethene-eq	4.13E-4	5.26E-6	1.57E-5	4.34E-4	4.84E-6	5.23E-5	5.77E-7	-1.86E-4	3.05E-4
AP	kg SO2-eq	2.77E-3	3.84E-5	1.55E-4	2.96E-3	3.47E-5	3.84E-4	1.75E-6	-1.22E-3	2.16E-3
EP	kg PO4 3−-eq	3.50E-4	7.53E-6	2.00E-5	3.78E-4	6.93E-6	5.84E-5	6.91E-7	-1.67E-4	2.77E-4
HTP	kg 1,4-DB-eq	2.44E-1	3.67E-3	1.68E-2	2.64E-1	3.45E-3	1.00E-1	1.84E-4	-1.16E-1	2.52E-1
FAETP	kg 1,4-DB-eq	7.61E-3	1.07E-4	5.74E-4	8.29E-3	1.01E-4	1.53E-3	5.82E-5	-3.33E-3	6.65E-3
MAETP	kg 1,4-DB-eq	1.74E+1	3.86E-1	2.26E+0	2.00E+1	3.61E-1	5.28E+0	7.08E-2	-7.51E+0	1.82E+1
TETP	kg 1,4-DB-eq	1.80E-3	1.30E-5	1.25E-3	3.06E-3	1.22E-5	3.57E-4	6.18E-7	-1.11E-3	2.31E-3
Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	6.97E-1	8.80E-3	4.14E-2	7.47E-1	8.14E-3	2.42E-1	2.60E-3	-3.30E-1	6.69E-1
GWP-f	kg CO2 eq	6.90E-1	8.80E-3	3.18E-2	7.30E-1	8.13E-3	2.27E-1	2.60E-3	-3.63E-1	6.05E-1
GWP-b	kg CO2 eq	6.59E-3	4.06E-6	6.56E-3	1.32E-2	4.94E-6	1.52E-2	3.26E-6	3.30E-2	6.14E-2
GWP-luluc	kg CO2 eq	7.38E-4	3.22E-6	3.02E-3	3.76E-3	2.88E-6	1.02E-4	6.81E-8	-4.71E-4	3.39E-3
ODP	kg CFC11 eq	3.38E-7	1.94E-9	3.36E-9	3.43E-7	1.87E-9	2.83E-8	9.63E-11	-1.76E-7	1.97E-7
AP	mol H+ eq	3.36E-3	5.10E-5	1.94E-4	3.60E-3	4.63E-5	4.82E-4	2.35E-6	-1.48E-3	2.66E-3
EP-fw	kg P eq	3.25E-5	8.87E-8	5.57E-7	3.32E-5	6.69E-8	3.43E-6	3.08E-9	-1.59E-5	2.08E-5
EP-m	kg N eq	6.06E-4	1.80E-5	4.58E-5	6.70E-4	1.66E-5	1.18E-4	1.45E-6	-2.65E-4	5.41E-4
EP-T	mol N eq	6.33E-3	1.98E-4	5.05E-4	7.04E-3	1.83E-4	1.30E-3	9.35E-6	-2.85E-3	5.68E-3
POCP	kg NMVOC eq	2.09E-3	5.66E-5	1.44E-4	2.29E-3	5.22E-5	3.90E-4	3.22E-6	-9.49E-4	1.79E-3
ADP-mm	kg Sb eq	6.79E-4	2.23E-7	1.11E-6	6.80E-4	2.10E-7	1.91E-6	2.35E-9	-7.32E-6	6.75E-4
ADP-f	MJ	1.65E+1	1.33E-1	3.55E-1	1.70E+1	1.25E-1	1.30E+0	7.04E-3	-8.72E+0	9.72E+0
WDP	m3 depriv.	1.04E+0	4.75E-4	2.75E-1	1.31E+0	3.83E-4	5.14E-2	4.69E-5	-5.51E-1	8.15E-1
PM	disease inc.	2.32E-8	7.90E-10	2.39E-9	2.64E-8	7.34E-10	5.98E-9	4.85E-11	-1.16E-8	2.15E-8
IR	kBq U-235 eq	3.59E-2	5.56E-4	5.65E-4	3.70E-2	5.46E-4	4.61E-3	3.23E-5	-1.83E-2	2.39E-2
ETP-fw	CTUe	2.03E+1	1.18E-1	8.25E-1	2.13E+1	1.01E-1	1.01E+1	1.11E-1	-7.48E+0	2.41E+1
HTP-c	CTUh	5.37E-10	3.84E-12	2.86E-11	5.70E-10	3.61E-12	1.46E-10	1.95E-13	-2.04E-10	5.16E-10
HTP-nc	CTUh	1.76E-8	1.29E-10	8.92E-10	1.87E-8	1.21E-10	3.50E-9	2.14E-11	-7.04E-9	1.53E-8
SQP	Pt	3.47E+0	1.15E-1	2.66E-2	3.61E+0	1.07E-1	7.95E-1	1.80E-2	-7.23E+0	-2.70E+0

Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.08E+0	1.66E-3	1.73E+0	2.81E+0	1.79E-3	9.40E-2	2.62E-4	-1.51E+0	1.39E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.08E+0	1.66E-3	1.73E+0	2.81E+0	1.79E-3	9.40E-2	2.62E-4	-1.51E+0	1.39E+0
PENRE	MJ	1.77E+1	1.41E-1	3.84E-1	1.83E+1	1.33E-1	1.39E+0	7.47E-3	-9.39E+0	1.04E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.77E+1	1.41E-1	3.84E-1	1.83E+1	1.33E-1	1.39E+0	7.47E-3	-9.39E+0	1.04E+1
PET	MJ	1.88E+1	1.43E-1	2.11E+0	2.11E+1	1.34E-1	1.48E+0	7.73E-3	-1.09E+1	1.18E+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	1.19E-2	1.62E-5	6.50E-3	1.84E-2	1.41E-5	1.41E-3	8.62E-6	-6.55E-3	1.33E-2
Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	9.66E-5	3.36E-7	3.77E-7	9.73E-5	3.19E-7	2.13E-6	8.58E-9	-7.36E-6	9.24E-5
NHWD	kg	6.71E-2	8.42E-3	5.83E-4	7.60E-2	7.74E-3	4.70E-2	3.09E-2	-2.94E-2	1.32E-1
RWD	kg	3.12E-5	8.71E-7	6.99E-7	3.27E-5	8.49E-7	4.95E-6	4.58E-8	-1.63E-5	2.23E-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

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