Environmental Profile

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

Ecochain v3.5.80

Product:	3085207 - PVC Vent.Duct BL 125x2.5 L=5.5 Round
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	1.78	0.04	0.08	1.89	0.03	0.63	0	-0.89	1.66
ADPE	kg Sb-eq	1.00E-2	8.13E-6	1.39E-5	1.00E-2	5.87E-6	5.00E-5	6.30E-8	-1.84E-4	9.91E-3
ADPF	kg Sb-eq	1.96E-1	2.34E-3	3.74E-3	2.02E-1	1.65E-3	1.76E-2	8.82E-5	-1.05E-1	1.16E-1
GWP	kg CO2-eq	1.59E+1	3.18E-1	6.65E-1	1.69E+1	2.25E-1	6.15E+0	5.75E-2	-8.88E+0	1.45E+1
ODP	kg CFC-11-eq	9.15E-6	5.65E-8	6.24E-8	9.27E-6	4.17E-8	7.21E-7	2.11E-9	-4.58E-6	5.45E-6
POCP	kg ethene-eq	9.60E-3	1.92E-4	2.93E-4	1.01E-2	1.35E-4	1.38E-3	1.51E-5	-4.49E-3	7.13E-3
AP	kg SO2-eq	6.30E-2	1.40E-3	2.61E-3	6.70E-2	9.68E-4	1.01E-2	4.72E-5	-2.86E-2	4.96E-2
EP	kg PO4 3−-eq	7.60E-3	2.75E-4	4.12E-4	8.28E-3	1.93E-4	1.53E-3	1.83E-5	-3.45E-3	6.57E-3
HTP	kg 1,4-DB-eq	6.21E+0	1.34E-1	2.51E-1	6.60E+0	9.62E-2	2.70E+0	4.89E-3	-2.78E+0	6.62E+0
FAETP	kg 1,4-DB-eq	1.53E-1	3.91E-3	1.02E-2	1.67E-1	2.82E-3	4.13E-2	1.48E-3	-6.08E-2	1.52E-1
MAETP	kg 1,4-DB-eq	4.20E+2	1.41E+1	4.17E+1	4.76E+2	1.01E+1	1.35E+2	1.81E+0	-1.79E+2	4.44E+2
TETP	kg 1,4-DB-eq	4.39E-2	4.74E-4	1.56E-2	6.00E-2	3.41E-4	9.66E-3	1.63E-5	-2.02E-2	4.98E-2
Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	1.58E+1	3.21E-1	7.83E-1	1.69E+1	2.27E-1	6.89E+0	6.70E-2	-9.15E+0	1.49E+1
GWP-f	kg CO2 eq	1.63E+1	3.21E-1	6.13E-1	1.73E+1	2.27E-1	6.20E+0	6.70E-2	-9.08E+0	1.47E+1
GWP-b	kg CO2 eq	-5.60E-1	1.48E-4	1.33E-1	-4.27E-1	1.38E-4	6.92E-1	8.54E-5	-6.30E-2	2.02E-1
GWP-luluc	kg CO2 eq	1.41E-2	1.18E-4	3.74E-2	5.16E-2	8.02E-5	2.74E-3	1.79E-6	-5.94E-3	4.85E-2
ODP	kg CFC11 eq	9.02E-6	7.09E-8	7.41E-8	9.16E-6	5.22E-8	7.43E-7	2.62E-9	-4.54E-6	5.42E-6
AP	mol H+ eq	7.61E-2	1.86E-3	3.34E-3	8.13E-2	1.29E-3	1.27E-2	6.32E-5	-3.45E-2	6.09E-2
EP-fw	kg P eq	7.50E-4	3.24E-6	8.77E-6	7.62E-4	1.87E-6	9.13E-5	8.10E-8	-3.34E-4	5.21E-4
EP-m	kg N eq	1.30E-2	6.56E-4	9.85E-4	1.46E-2	4.62E-4	3.09E-3	3.87E-5	-6.01E-3	1.22E-2
EP-T	mol N eq	1.41E-1	7.23E-3	1.06E-2	1.59E-1	5.09E-3	3.41E-2	2.52E-4	-6.44E-2	1.34E-1
POCP	kg NMVOC eq	4.77E-2	2.07E-3	2.98E-3	5.27E-2	1.46E-3	1.02E-2	8.62E-5	-2.21E-2	4.23E-2
ADP-mm	kg Sb eq	1.00E-2	8.13E-6	1.39E-5	1.00E-2	5.87E-6	5.00E-5	6.30E-8	-1.84E-4	9.91E-3
ADP-f	MJ	4.16E+2	4.84E+0	7.10E+0	4.28E+2	3.48E+0	3.48E+1	1.91E-1	-2.20E+2	2.47E+2
WDP	m3 depriv.	2.74E+1	1.73E-2	4.80E+0	3.22E+1	1.07E-2	1.37E+0	1.17E-3	-1.30E+1	2.06E+1
PM	disease inc.	5.21E-7	2.88E-8	5.19E-8	6.02E-7	2.05E-8	1.58E-7	1.31E-9	-2.22E-7	5.60E-7
IR	kBq U-235 eq	9.11E-1	2.03E-2	1.28E-2	9.44E-1	1.52E-2	1.22E-1	8.74E-4	-4.21E-1	6.61E-1
ETP-fw	CTUe	3.59E+2	4.32E+0	1.18E+1	3.75E+2	2.83E+0	2.65E+2	2.92E+0	-1.28E+2	5.17E+2
HTP-c	CTUh	1.26E-8	1.40E-10	4.04E-10	1.32E-8	1.01E-10	3.87E-9	5.10E-12	-4.81E-9	1.23E-8
HTP-nc	CTUh	4.10E-7	4.72E-9	1.24E-8	4.27E-7	3.37E-9	9.27E-8	5.62E-10	-1.66E-7	3.58E-7
SQP	Pt	1.17E+2	4.20E+0	5.31E-1	1.22E+2	2.98E+0	2.16E+1	4.85E-1	-3.67E+1	1.10E+2

Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	3.01E+1	6.06E-2	2.14E+1	5.16E+1	4.99E-2	2.51E+0	6.95E-3	-1.22E+1	4.20E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	3.01E+1	6.06E-2	2.14E+1	5.16E+1	4.99E-2	2.51E+0	6.95E-3	-1.22E+1	4.20E+1
PENRE	MJ	4.47E+2	5.14E+0	7.69E+0	4.59E+2	3.69E+0	3.70E+1	2.02E-1	-2.37E+2	2.63E+2
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	4.47E+2	5.14E+0	7.69E+0	4.59E+2	3.69E+0	3.70E+1	2.02E-1	-2.37E+2	2.63E+2
PET	MJ	4.77E+2	5.20E+0	2.91E+1	5.11E+2	3.74E+0	3.95E+1	2.09E-1	-2.49E+2	3.05E+2
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	3.00E-1	5.90E-4	1.13E-1	4.13E-1	3.94E-4	3.75E-2	2.33E-4	-1.36E-1	3.15E-1
Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.54E-3	1.23E-5	9.93E-6	1.57E-3	8.90E-6	5.61E-5	2.31E-7	-1.83E-4	1.45E-3
NHWD	kg	1.62E+0	3.07E-1	1.43E-2	1.95E+0	2.16E-1	1.29E+0	8.62E-1	-6.98E-1	3.61E+0
RWD	kg	7.91E-4	3.18E-5	1.79E-5	8.41E-4	2.37E-5	1.30E-4	1.24E-6	-3.71E-4	6.25E-4
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

Ecochain

Ecochain Technologies BV
H.J.E. Wenckebachweg 123, 1096 AM Amsterdam, The Netherlands
https://www.ecochain.com
+31 20 3035 777