Environmental Profile

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

Ecochain v3.5.80

Product:	3085239 - PVC Vent. Solv.Cement Coupler BL 195 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	0.05	0	0	0.05	0	0.01	0	-0.02	0.04
ADPE	kg Sb-eq	4.20E-4	1.41E-7	7.07E-7	4.20E-4	1.30E-7	1.19E-6	1.46E-9	-4.57E-6	4.17E-4
ADPF	kg Sb-eq	4.84E-3	4.05E-5	1.21E-4	5.00E-3	3.66E-5	4.10E-4	2.01E-6	-2.58E-3	2.87E-3
GWP	kg CO2-eq	4.22E-1	5.51E-3	2.31E-2	4.50E-1	4.99E-3	1.40E-1	1.38E-3	-2.23E-1	3.73E-1
ODP	kg CFC-11-eq	2.12E-7	9.78E-10	1.82E-9	2.15E-7	9.25E-10	1.71E-8	4.80E-11	-1.11E-7	1.22E-7
POCP	kg ethene-eq	2.58E-4	3.32E-6	1.00E-5	2.71E-4	2.99E-6	3.28E-5	3.57E-7	-1.18E-4	1.89E-4
AP	kg SO2-eq	1.73E-3	2.42E-5	9.91E-5	1.85E-3	2.15E-5	2.40E-4	1.08E-6	-7.77E-4	1.34E-3
EP	kg PO4 3−-eq	2.23E-4	4.76E-6	1.27E-5	2.40E-4	4.29E-6	3.66E-5	4.27E-7	-1.10E-4	1.72E-4
HTP	kg 1,4-DB-eq	1.53E-1	2.32E-3	1.07E-2	1.66E-1	2.13E-3	6.24E-2	1.14E-4	-7.34E-2	1.57E-1
FAETP	kg 1,4-DB-eq	4.93E-3	6.77E-5	3.66E-4	5.37E-3	6.25E-5	9.54E-4	3.60E-5	-2.24E-3	4.18E-3
MAETP	kg 1,4-DB-eq	1.09E+1	2.44E-1	1.44E+0	1.26E+1	2.23E-1	3.32E+0	4.38E-2	-4.76E+0	1.14E+1
TETP	kg 1,4-DB-eq	1.14E-3	8.20E-6	7.96E-4	1.94E-3	7.56E-6	2.21E-4	3.82E-7	-7.48E-4	1.42E-3
Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	4.36E-1	5.56E-3	2.64E-2	4.68E-1	5.03E-3	1.53E-1	1.61E-3	-2.01E-1	4.26E-1
GWP-f	kg CO2 eq	4.32E-1	5.56E-3	2.03E-2	4.58E-1	5.03E-3	1.41E-1	1.61E-3	-2.28E-1	3.77E-1
GWP-b	kg CO2 eq	4.17E-3	2.57E-6	4.18E-3	8.35E-3	3.05E-6	1.21E-2	2.02E-6	2.66E-2	4.71E-2
GWP-luluc	kg CO2 eq	4.91E-4	2.04E-6	1.92E-3	2.42E-3	1.78E-6	6.34E-5	4.21E-8	-3.34E-4	2.15E-3
ODP	kg CFC11 eq	2.09E-7	1.23E-9	2.14E-9	2.13E-7	1.16E-9	1.76E-8	5.95E-11	-1.10E-7	1.22E-7
AP	mol H+ eq	2.11E-3	3.22E-5	1.24E-4	2.26E-3	2.86E-5	3.01E-4	1.45E-6	-9.43E-4	1.65E-3
EP-fw	kg P eq	2.05E-5	5.61E-8	3.55E-7	2.09E-5	4.14E-8	2.12E-6	1.90E-9	-1.03E-5	1.27E-5
EP-m	kg N eq	3.85E-4	1.14E-5	2.92E-5	4.26E-4	1.02E-5	7.42E-5	8.97E-7	-1.70E-4	3.41E-4
EP-T	mol N eq	4.02E-3	1.25E-4	3.22E-4	4.46E-3	1.13E-4	8.17E-4	5.78E-6	-1.84E-3	3.56E-3
POCP	kg NMVOC eq	1.32E-3	3.57E-5	9.16E-5	1.44E-3	3.23E-5	2.45E-4	1.99E-6	-6.05E-4	1.12E-3
ADP-mm	kg Sb eq	4.20E-4	1.41E-7	7.07E-7	4.20E-4	1.30E-7	1.19E-6	1.46E-9	-4.57E-6	4.17E-4
ADP-f	MJ	1.03E+1	8.38E-2	2.27E-1	1.06E+1	7.72E-2	8.11E-1	4.35E-3	-5.45E+0	6.05E+0
WDP	m3 depriv.	6.44E-1	3.00E-4	1.75E-1	8.20E-1	2.37E-4	3.18E-2	2.90E-5	-3.50E-1	5.02E-1
PM	disease inc.	1.48E-8	4.99E-10	1.53E-9	1.68E-8	4.54E-10	3.74E-9	3.00E-11	-7.78E-9	1.33E-8
IR	kBq U-235 eq	2.24E-2	3.51E-4	3.60E-4	2.31E-2	3.37E-4	2.88E-3	2.00E-5	-1.17E-2	1.47E-2
ETP-fw	CTUe	1.33E+1	7.47E-2	5.26E-1	1.39E+1	6.27E-2	6.25E+0	6.88E-2	-5.09E+0	1.52E+1
HTP-c	CTUh	3.35E-10	2.42E-12	1.82E-11	3.56E-10	2.23E-12	9.10E-11	1.21E-13	-1.29E-10	3.20E-10
HTP-nc	CTUh	1.10E-8	8.17E-11	5.69E-10	1.16E-8	7.47E-11	2.17E-9	1.32E-11	-4.47E-9	9.43E-9
SQP	Pt	2.39E+0	7.27E-2	1.69E-2	2.48E+0	6.60E-2	4.95E-1	1.11E-2	-5.58E+0	-2.53E+0

Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	7.18E-1	1.05E-3	1.10E+0	1.82E+0	1.11E-3	5.83E-2	1.62E-4	-1.14E+0	7.43E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	7.18E-1	1.05E-3	1.10E+0	1.82E+0	1.11E-3	5.83E-2	1.62E-4	-1.14E+0	7.43E-1
PENRE	MJ	1.10E+1	8.90E-2	2.45E-1	1.14E+1	8.19E-2	8.62E-1	4.62E-3	-5.86E+0	6.47E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.10E+1	8.90E-2	2.45E-1	1.14E+1	8.19E-2	8.62E-1	4.62E-3	-5.86E+0	6.47E+0
PET	MJ	1.18E+1	9.00E-2	1.35E+0	1.32E+1	8.30E-2	9.21E-1	4.78E-3	-7.00E+0	7.21E+0
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	7.42E-3	1.02E-5	4.15E-3	1.16E-2	8.73E-6	8.73E-4	5.33E-6	-4.28E-3	8.19E-3
Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	5.98E-5	2.12E-7	2.41E-7	6.03E-5	1.97E-7	1.33E-6	5.31E-9	-4.63E-6	5.72E-5
NHWD	kg	4.26E-2	5.32E-3	3.72E-4	4.82E-2	4.78E-3	2.93E-2	1.91E-2	-1.87E-2	8.28E-2
RWD	kg	1.95E-5	5.50E-7	4.46E-7	2.05E-5	5.25E-7	3.10E-6	2.83E-8	-1.04E-5	1.38E-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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