Environmental Profile

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

Ecochain v3.5.80

Product:	3085250 - PVC Endp.Valve 90° BL 235x160 H=100 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	0.17	0	0.01	0.18	0	0.05	0	-0.08	0.16
ADPE	kg Sb-eq	1.57E-3	5.17E-7	2.57E-6	1.57E-3	4.86E-7	4.42E-6	5.43E-9	-1.69E-5	1.56E-3
ADPF	kg Sb-eq	1.80E-2	1.49E-4	4.41E-4	1.86E-2	1.37E-4	1.52E-3	7.52E-6	-9.56E-3	1.07E-2
GWP	kg CO2-eq	1.56E+0	2.02E-2	8.37E-2	1.66E+0	1.86E-2	5.20E-1	5.14E-3	-8.23E-1	1.38E+0
ODP	kg CFC-11-eq	7.90E-7	3.59E-9	6.62E-9	8.00E-7	3.45E-9	6.36E-8	1.79E-10	-4.12E-7	4.56E-7
POCP	kg ethene-eq	9.54E-4	1.22E-5	3.64E-5	1.00E-3	1.12E-5	1.21E-4	1.33E-6	-4.33E-4	7.04E-4
AP	kg SO2-eq	6.40E-3	8.90E-5	3.60E-4	6.85E-3	8.01E-5	8.89E-4	4.05E-6	-2.84E-3	4.99E-3
EP	kg PO4 3−-eq	8.14E-4	1.75E-5	4.63E-5	8.78E-4	1.60E-5	1.35E-4	1.59E-6	-3.92E-4	6.39E-4
HTP	kg 1,4-DB-eq	5.64E-1	8.52E-3	3.89E-2	6.11E-1	7.96E-3	2.32E-1	4.26E-4	-2.69E-1	5.82E-1
FAETP	kg 1,4-DB-eq	1.78E-2	2.49E-4	1.33E-3	1.93E-2	2.33E-4	3.54E-3	1.34E-4	-7.85E-3	1.54E-2
MAETP	kg 1,4-DB-eq	4.03E+1	8.95E-1	5.23E+0	4.64E+1	8.33E-1	1.22E+1	1.63E-1	-1.74E+1	4.22E+1
TETP	kg 1,4-DB-eq	4.17E-3	3.01E-5	2.89E-3	7.09E-3	2.82E-5	8.23E-4	1.43E-6	-2.63E-3	5.32E-3
Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	1.61E+0	2.04E-2	9.58E-2	1.73E+0	1.88E-2	5.61E-1	5.99E-3	-7.60E-1	1.56E+0
GWP-f	kg CO2 eq	1.60E+0	2.04E-2	7.36E-2	1.69E+0	1.88E-2	5.23E-1	5.99E-3	-8.40E-1	1.40E+0
GWP-b	kg CO2 eq	1.53E-2	9.42E-6	1.52E-2	3.05E-2	1.14E-5	3.76E-2	7.53E-6	8.18E-2	1.50E-1
GWP-luluc	kg CO2 eq	1.73E-3	7.48E-6	6.99E-3	8.73E-3	6.64E-6	2.36E-4	1.57E-7	-1.13E-3	7.85E-3
ODP	kg CFC11 eq	7.80E-7	4.50E-9	7.78E-9	7.92E-7	4.33E-9	6.55E-8	2.22E-10	-4.08E-7	4.54E-7
AP	mol H+ eq	7.78E-3	1.18E-4	4.49E-4	8.34E-3	1.07E-4	1.12E-3	5.41E-6	-3.44E-3	6.13E-3
EP-fw	kg P eq	7.54E-5	2.06E-7	1.29E-6	7.69E-5	1.54E-7	7.91E-6	7.10E-9	-3.71E-5	4.79E-5
EP-m	kg N eq	1.41E-3	4.17E-5	1.06E-4	1.56E-3	3.83E-5	2.74E-4	3.35E-6	-6.17E-4	1.25E-3
EP-T	mol N eq	1.47E-2	4.60E-4	1.17E-3	1.63E-2	4.22E-4	3.02E-3	2.16E-5	-6.65E-3	1.31E-2
POCP	kg NMVOC eq	4.85E-3	1.31E-4	3.33E-4	5.31E-3	1.21E-4	9.03E-4	7.43E-6	-2.21E-3	4.14E-3
ADP-mm	kg Sb eq	1.57E-3	5.17E-7	2.57E-6	1.57E-3	4.86E-7	4.42E-6	5.43E-9	-1.69E-5	1.56E-3
ADP-f	MJ	3.82E+1	3.08E-1	8.23E-1	3.93E+1	2.88E-1	3.01E+0	1.62E-2	-2.02E+1	2.25E+1
WDP	m3 depriv.	2.40E+0	1.10E-3	6.37E-1	3.04E+0	8.84E-4	1.19E-1	1.08E-4	-1.28E+0	1.88E+0
PM	disease inc.	5.40E-8	1.83E-9	5.54E-9	6.14E-8	1.69E-9	1.38E-8	1.12E-10	-2.74E-8	4.96E-8
IR	kBq U-235 eq	8.30E-2	1.29E-3	1.31E-3	8.56E-2	1.26E-3	1.07E-2	7.46E-5	-4.26E-2	5.50E-2
ETP-fw	CTUe	4.76E+1	2.74E-1	1.91E+0	4.98E+1	2.34E-1	2.33E+1	2.57E-1	-1.77E+1	5.59E+1
HTP-c	CTUh	1.24E-9	8.90E-12	6.62E-11	1.32E-9	8.32E-12	3.37E-10	4.51E-13	-4.73E-10	1.19E-9
HTP-nc	CTUh	4.08E-8	3.00E-10	2.07E-9	4.32E-8	2.79E-10	8.09E-9	4.93E-11	-1.64E-8	3.52E-8
SQP	Pt	8.23E+0	2.67E-1	6.15E-2	8.56E+0	2.46E-1	1.84E+0	4.16E-2	-1.77E+1	-7.03E+0

Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.53E+0	3.85E-3	4.00E+0	6.54E+0	4.13E-3	2.17E-1	6.05E-4	-3.68E+0	3.08E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.53E+0	3.85E-3	4.00E+0	6.54E+0	4.13E-3	2.17E-1	6.05E-4	-3.68E+0	3.08E+0
PENRE	MJ	4.10E+1	3.27E-1	8.90E-1	4.22E+1	3.06E-1	3.20E+0	1.72E-2	-2.17E+1	2.40E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	4.10E+1	3.27E-1	8.90E-1	4.22E+1	3.06E-1	3.20E+0	1.72E-2	-2.17E+1	2.40E+1
PET	MJ	4.35E+1	3.31E-1	4.89E+0	4.87E+1	3.10E-1	3.42E+0	1.78E-2	-2.54E+1	2.71E+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	2.75E-2	3.75E-5	1.51E-2	4.26E-2	3.26E-5	3.25E-3	1.99E-5	-1.53E-2	3.06E-2
Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.23E-4	7.80E-7	8.74E-7	2.25E-4	7.37E-7	4.94E-6	1.98E-8	-1.71E-5	2.13E-4
NHWD	kg	1.56E-1	1.95E-2	1.35E-3	1.77E-1	1.79E-2	1.09E-1	7.14E-2	-6.83E-2	3.06E-1
RWD	kg	7.22E-5	2.02E-6	1.62E-6	7.58E-5	1.96E-6	1.15E-5	1.06E-7	-3.79E-5	5.14E-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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