Environmental Profile

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

Ecochain v3.5.80

Product:	3085249 - PVC Endp.Valve 90° BL 195x125 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	0.11	0	0.01	0.12	0	0.03	0	-0.06	0.1
ADPE	kg Sb-eq	9.69E-4	3.39E-7	1.71E-6	9.71E-4	3.00E-7	2.82E-6	3.36E-9	-1.07E-5	9.64E-4
ADPF	kg Sb-eq	1.14E-2	9.76E-5	2.94E-4	1.18E-2	8.45E-5	9.59E-4	4.65E-6	-6.06E-3	6.74E-3
GWP	kg CO2-eq	1.00E+0	1.33E-2	5.57E-2	1.07E+0	1.15E-2	3.25E-1	3.18E-3	-5.30E-1	8.78E-1
ODP	kg CFC-11-eq	4.93E-7	2.36E-9	4.41E-9	5.00E-7	2.14E-9	3.98E-8	1.11E-10	-2.58E-7	2.84E-7
POCP	kg ethene-eq	6.06E-4	8.01E-6	2.42E-5	6.39E-4	6.91E-6	7.79E-5	8.23E-7	-2.84E-4	4.40E-4
AP	kg SO2-eq	4.10E-3	5.84E-5	2.40E-4	4.40E-3	4.96E-5	5.64E-4	2.50E-6	-1.90E-3	3.11E-3
EP	kg PO4 3−-eq	5.45E-4	1.15E-5	3.08E-5	5.87E-4	9.90E-6	8.66E-5	9.86E-7	-2.84E-4	4.01E-4
HTP	kg 1,4-DB-eq	3.61E-1	5.59E-3	2.59E-2	3.93E-1	4.93E-3	1.46E-1	2.63E-4	-1.78E-1	3.66E-1
FAETP	kg 1,4-DB-eq	1.24E-2	1.63E-4	8.84E-4	1.35E-2	1.44E-4	2.25E-3	8.31E-5	-5.99E-3	9.98E-3
MAETP	kg 1,4-DB-eq	2.59E+1	5.87E-1	3.48E+0	3.00E+1	5.15E-1	7.95E+0	1.01E-1	-1.15E+1	2.70E+1
TETP	kg 1,4-DB-eq	2.73E-3	1.98E-5	1.93E-3	4.68E-3	1.75E-5	5.14E-4	8.82E-7	-2.01E-3	3.20E-3
Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	1.03E+0	1.34E-2	6.38E-2	1.11E+0	1.16E-2	3.67E-1	3.71E-3	-4.52E-1	1.04E+0
GWP-f	kg CO2 eq	1.02E+0	1.34E-2	4.90E-2	1.09E+0	1.16E-2	3.27E-1	3.71E-3	-5.41E-1	8.86E-1
GWP-b	kg CO2 eq	1.01E-2	6.18E-6	1.01E-2	2.02E-2	7.05E-6	4.07E-2	4.65E-6	9.04E-2	1.51E-1
GWP-luluc	kg CO2 eq	1.29E-3	4.91E-6	4.65E-3	5.95E-3	4.11E-6	1.47E-4	9.73E-8	-9.74E-4	5.13E-3
ODP	kg CFC11 eq	4.87E-7	2.96E-9	5.18E-9	4.95E-7	2.68E-9	4.10E-8	1.37E-10	-2.55E-7	2.84E-7
AP	mol H+ eq	5.01E-3	7.77E-5	2.99E-4	5.38E-3	6.61E-5	7.09E-4	3.35E-6	-2.31E-3	3.85E-3
EP-fw	kg P eq	4.91E-5	1.35E-7	8.59E-7	5.01E-5	9.55E-8	4.94E-6	4.39E-9	-2.64E-5	2.88E-5
EP-m	kg N eq	9.38E-4	2.74E-5	7.06E-5	1.04E-3	2.37E-5	1.76E-4	2.07E-6	-4.25E-4	8.14E-4
EP-T	mol N eq	9.74E-3	3.02E-4	7.79E-4	1.08E-2	2.61E-4	1.94E-3	1.33E-5	-4.61E-3	8.42E-3
POCP	kg NMVOC eq	3.14E-3	8.61E-5	2.22E-4	3.44E-3	7.45E-5	5.82E-4	4.60E-6	-1.49E-3	2.62E-3
ADP-mm	kg Sb eq	9.69E-4	3.39E-7	1.71E-6	9.71E-4	3.00E-7	2.82E-6	3.36E-9	-1.07E-5	9.64E-4
ADP-f	MJ	2.41E+1	2.02E-1	5.48E-1	2.49E+1	1.78E-1	1.90E+0	1.00E-2	-1.28E+1	1.41E+1
WDP	m3 depriv.	1.50E+0	7.22E-4	4.24E-1	1.92E+0	5.47E-4	7.37E-2	6.69E-5	-8.49E-1	1.15E+0
PM	disease inc.	3.64E-8	1.20E-9	3.69E-9	4.13E-8	1.05E-9	8.84E-9	6.92E-11	-2.07E-8	3.06E-8
IR	kBq U-235 eq	5.30E-2	8.46E-4	8.71E-4	5.48E-2	7.79E-4	6.76E-3	4.61E-5	-2.88E-2	3.36E-2
ETP-fw	CTUe	3.44E+1	1.80E-1	1.27E+0	3.58E+1	1.45E-1	1.45E+1	1.59E-1	-1.39E+1	3.67E+1
HTP-c	CTUh	7.89E-10	5.84E-12	4.41E-11	8.39E-10	5.15E-12	2.14E-10	2.79E-13	-3.16E-10	7.43E-10
HTP-nc	CTUh	2.58E-8	1.97E-10	1.38E-9	2.74E-8	1.72E-10	5.07E-9	3.05E-11	-1.09E-8	2.17E-8
SQP	Pt	6.69E+0	1.75E-1	4.10E-2	6.91E+0	1.52E-1	1.16E+0	2.57E-2	-1.81E+1	-9.84E+0

Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.90E+0	2.53E-3	2.66E+0	4.57E+0	2.56E-3	1.35E-1	3.74E-4	-3.57E+0	1.14E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.90E+0	2.53E-3	2.66E+0	4.57E+0	2.56E-3	1.35E-1	3.74E-4	-3.57E+0	1.14E+0
PENRE	MJ	2.59E+1	2.14E-1	5.92E-1	2.67E+1	1.89E-1	2.02E+0	1.07E-2	-1.38E+1	1.51E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.59E+1	2.14E-1	5.92E-1	2.67E+1	1.89E-1	2.02E+0	1.07E-2	-1.38E+1	1.51E+1
PET	MJ	2.78E+1	2.17E-1	3.26E+0	3.13E+1	1.92E-1	2.15E+0	1.10E-2	-1.74E+1	1.63E+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	1.75E-2	2.46E-5	1.00E-2	2.75E-2	2.02E-5	2.03E-3	1.23E-5	-1.10E-2	1.86E-2
Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.39E-4	5.12E-7	5.82E-7	1.40E-4	4.56E-7	3.15E-6	1.22E-8	-1.10E-5	1.32E-4
NHWD	kg	1.03E-1	1.28E-2	8.99E-4	1.17E-1	1.10E-2	6.88E-2	4.41E-2	-4.53E-2	1.96E-1
RWD	kg	4.64E-5	1.33E-6	1.08E-6	4.88E-5	1.21E-6	7.32E-6	6.53E-8	-2.58E-5	3.16E-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