

Environmental Profile

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

Ecochain v3.5.80



Product: 3004157 - PVC RWA Tee 45° GY 100 S/RSP
Unit: 1 piece
Manufacturer: Wavin - NL - Hardenberg - Verified
Address: J.C. Kellerlaan 3
7772 SG Hardenberg
Netherlands

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



Wavin carries a complete PVC range of outdoor sewers. With PVC as a material, a smooth-walled, flexible and completely watertight piping system is obtained. Moreover, PVC is absolutely resistant to all substances that occur in domestic waste water. By working with a light material, large pipe lengths and plug connections, a very fast installation is guaranteed.

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					Use stage							End-of-Life stage				
A1 Raw material supply A2 Transport A3 Manufacturing					B1 Use B2 Maintenance B3 Repair B4 Replacement B5 Refurbishment B6 Operational energy use B7 Operational water use							C1 De-construction demolition C2 Transport C3 Waste processing C4 Disposal				
Construction process stage					Benefits and loads beyond the system boundaries											
A4 Transport gate to site A5 Assembly / Construction installation process					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]

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Results

Environmental impact SBK set 1	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
ECI	euro	0.08	0	0	0.09	0	0.03	0	-0.04	0.07
ADPE	kg Sb-eq	7.34E-4	2.74E-7	1.14E-6	7.36E-4	2.41E-7	2.26E-6	2.69E-9	-8.62E-6	7.30E-4
ADPF	kg Sb-eq	8.81E-3	7.87E-5	1.95E-4	9.08E-3	6.79E-5	7.70E-4	3.73E-6	-4.84E-3	5.08E-3
GWP	kg CO2-eq	7.51E-1	1.07E-2	3.71E-2	7.98E-1	9.24E-3	2.61E-1	2.54E-3	-4.23E-1	6.48E-1
ODP	kg CFC-11-eq	4.10E-7	1.90E-9	2.93E-9	4.15E-7	1.71E-9	3.21E-8	8.89E-11	-2.07E-7	2.41E-7
POCP	kg ethene-eq	4.26E-4	6.46E-6	1.61E-5	4.48E-4	5.55E-6	6.22E-5	6.58E-7	-2.24E-4	2.93E-4
AP	kg SO2-eq	3.00E-3	4.71E-5	1.59E-4	3.21E-3	3.98E-5	4.53E-4	2.01E-6	-1.51E-3	2.20E-3
EP	kg PO4 3--eq	4.06E-4	9.25E-6	2.05E-5	4.36E-4	7.94E-6	6.94E-5	7.91E-7	-2.23E-4	2.92E-4
HTP	kg 1,4-DB-eq	2.92E-1	4.51E-3	1.72E-2	3.13E-1	3.95E-3	1.17E-1	2.11E-4	-1.41E-1	2.93E-1
FAETP	kg 1,4-DB-eq	9.76E-3	1.32E-4	5.89E-4	1.05E-2	1.16E-4	1.80E-3	6.49E-5	-4.66E-3	7.80E-3
MAETP	kg 1,4-DB-eq	2.07E+1	4.73E-1	2.32E+0	2.35E+1	4.14E-1	6.35E+0	7.94E-2	-9.16E+0	2.12E+1
TETP	kg 1,4-DB-eq	2.22E-3	1.59E-5	1.28E-3	3.51E-3	1.40E-5	4.13E-4	7.09E-7	-1.56E-3	2.38E-3
Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	7.75E-1	1.08E-2	4.25E-2	8.29E-1	9.33E-3	2.93E-1	2.96E-3	-3.65E-1	7.68E-1
GWP-f	kg CO2 eq	7.67E-1	1.08E-2	3.26E-2	8.10E-1	9.32E-3	2.62E-1	2.96E-3	-4.32E-1	6.53E-1
GWP-b	kg CO2 eq	7.86E-3	4.99E-6	6.73E-3	1.46E-2	5.66E-6	3.02E-2	3.74E-6	6.70E-2	1.12E-1
GWP-luluc	kg CO2 eq	1.02E-3	3.96E-6	3.10E-3	4.12E-3	3.30E-6	1.19E-4	7.76E-8	-7.44E-4	3.50E-3
ODP	kg CFC11 eq	4.05E-7	2.38E-9	3.45E-9	4.11E-7	2.15E-9	3.31E-8	1.10E-10	-2.05E-7	2.41E-7
AP	mol H+ eq	3.68E-3	6.26E-5	1.99E-4	3.94E-3	5.31E-5	5.69E-4	2.69E-6	-1.83E-3	2.74E-3
EP-fw	kg P eq	3.78E-5	1.09E-7	5.71E-7	3.84E-5	7.67E-8	3.98E-6	3.51E-9	-2.07E-5	2.18E-5
EP-m	kg N eq	6.87E-4	2.21E-5	4.70E-5	7.56E-4	1.90E-5	1.41E-4	1.66E-6	-3.35E-4	5.83E-4
EP-T	mol N eq	7.32E-3	2.43E-4	5.18E-4	8.09E-3	2.09E-4	1.55E-3	1.07E-5	-3.64E-3	6.22E-3
POCP	kg NMVOC eq	2.29E-3	6.95E-5	1.47E-4	2.50E-3	5.98E-5	4.65E-4	3.68E-6	-1.17E-3	1.86E-3
ADP-mm	kg Sb eq	7.34E-4	2.74E-7	1.14E-6	7.36E-4	2.41E-7	2.26E-6	2.69E-9	-8.61E-6	7.30E-4
ADP-f	MJ	1.88E+1	1.63E-1	3.65E-1	1.93E+1	1.43E-1	1.52E+0	8.06E-3	-1.02E+1	1.07E+1
WDP	m3 depriv.	1.23E+0	5.83E-4	2.82E-1	1.51E+0	4.39E-4	5.95E-2	5.22E-5	-6.75E-1	8.94E-1
PM	disease inc.	2.63E-8	9.70E-10	2.46E-9	2.97E-8	8.41E-10	7.08E-9	5.55E-11	-1.61E-8	2.16E-8
IR	kBq U-235 eq	4.34E-2	6.82E-4	5.80E-4	4.46E-2	6.25E-4	5.43E-3	3.70E-5	-2.28E-2	2.79E-2
ETP-fw	CTUe	2.67E+1	1.45E-1	8.47E-1	2.77E+1	1.16E-1	1.17E+1	1.29E-1	-1.08E+1	2.89E+1
HTP-c	CTUh	6.27E-10	4.71E-12	2.93E-11	6.61E-10	4.13E-12	1.71E-10	2.23E-13	-2.51E-10	5.86E-10
HTP-nc	CTUh	2.07E-8	1.59E-10	9.16E-10	2.17E-8	1.38E-10	4.08E-9	2.47E-11	-8.67E-9	1.73E-8
SQP	Pt	5.18E+0	1.41E-1	2.73E-2	5.35E+0	1.22E-1	9.28E-1	2.06E-2	-1.35E+1	-7.11E+0

Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.50E+0	2.04E-3	1.77E+0	3.27E+0	2.05E-3	1.09E-1	3.01E-4	-2.69E+0	6.95E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.50E+0	2.04E-3	1.77E+0	3.27E+0	2.05E-3	1.09E-1	3.01E-4	-2.69E+0	6.95E-1
PENRE	MJ	2.01E+1	1.73E-1	3.94E-1	2.07E+1	1.52E-1	1.62E+0	8.55E-3	-1.10E+1	1.14E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.01E+1	1.73E-1	3.94E-1	2.07E+1	1.52E-1	1.62E+0	8.55E-3	-1.10E+1	1.14E+1
PET	MJ	2.16E+1	1.75E-1	2.17E+0	2.40E+1	1.54E-1	1.73E+0	8.85E-3	-1.37E+1	1.21E+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	1.40E-2	1.98E-5	6.67E-3	2.07E-2	1.62E-5	1.64E-3	9.88E-6	-8.60E-3	1.38E-2
Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.06E-4	4.13E-7	3.87E-7	1.07E-4	3.66E-7	2.52E-6	9.82E-9	-8.84E-6	1.01E-4
NHWD	kg	8.25E-2	1.03E-2	5.98E-4	9.34E-2	8.87E-3	5.51E-2	3.54E-2	-3.61E-2	1.57E-1
RWD	kg	3.79E-5	1.07E-6	7.18E-7	3.97E-5	9.73E-7	5.86E-6	5.24E-8	-2.04E-5	2.62E-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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