

Environmental Profile

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

Ecochain v3.5.80



Product: 3004155 - PVC RWA Tee 45° GY 80 S/RSP
Unit: 1 piece
Manufacturer: Wavin - NL - Hardenberg - Verified
Address: J.C. Kellerlaan 3
7772 SG Hardenberg
Netherlands

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.

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					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	0.05	0	0	0.05	0	0.02	0	-0.03	0.04
ADPE	kg Sb-eq	4.36E-4	1.59E-7	6.75E-7	4.36E-4	1.43E-7	1.33E-6	1.60E-9	-5.07E-6	4.33E-4
ADPF	kg Sb-eq	5.18E-3	4.58E-5	1.16E-4	5.34E-3	4.03E-5	4.54E-4	2.21E-6	-2.85E-3	2.99E-3
GWP	kg CO2-eq	4.39E-1	6.23E-3	2.20E-2	4.68E-1	5.48E-3	1.54E-1	1.51E-3	-2.47E-1	3.81E-1
ODP	kg CFC-11-eq	2.42E-7	1.10E-9	1.74E-9	2.45E-7	1.02E-9	1.90E-8	5.27E-11	-1.23E-7	1.43E-7
POCP	kg ethene-eq	2.50E-4	3.76E-6	9.56E-6	2.63E-4	3.29E-6	3.64E-5	3.90E-7	-1.30E-4	1.73E-4
AP	kg SO2-eq	1.76E-3	2.74E-5	9.46E-5	1.88E-3	2.36E-5	2.66E-4	1.19E-6	-8.70E-4	1.30E-3
EP	kg PO4 3--eq	2.34E-4	5.38E-6	1.22E-5	2.52E-4	4.71E-6	4.07E-5	4.69E-7	-1.25E-4	1.73E-4
HTP	kg 1,4-DB-eq	1.71E-1	2.62E-3	1.02E-2	1.84E-1	2.35E-3	6.91E-2	1.25E-4	-8.21E-2	1.73E-1
FAETP	kg 1,4-DB-eq	5.55E-3	7.65E-5	3.49E-4	5.98E-3	6.87E-5	1.06E-3	3.85E-5	-2.58E-3	4.56E-3
MAETP	kg 1,4-DB-eq	1.21E+1	2.75E-1	1.38E+0	1.38E+1	2.45E-1	3.70E+0	4.71E-2	-5.32E+0	1.25E+1
TETP	kg 1,4-DB-eq	1.29E-3	9.27E-6	7.60E-4	2.06E-3	8.31E-6	2.44E-4	4.21E-7	-8.64E-4	1.45E-3
Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	4.54E-1	6.29E-3	2.52E-2	4.86E-1	5.53E-3	1.70E-1	1.75E-3	-2.20E-1	4.43E-1
GWP-f	kg CO2 eq	4.49E-1	6.28E-3	1.94E-2	4.75E-1	5.53E-3	1.55E-1	1.75E-3	-2.53E-1	3.84E-1
GWP-b	kg CO2 eq	4.56E-3	2.90E-6	3.99E-3	8.56E-3	3.36E-6	1.51E-2	2.22E-6	3.33E-2	5.69E-2
GWP-luluc	kg CO2 eq	5.68E-4	2.30E-6	1.84E-3	2.41E-3	1.96E-6	7.02E-5	4.61E-8	-3.96E-4	2.08E-3
ODP	kg CFC11 eq	2.39E-7	1.39E-9	2.04E-9	2.43E-7	1.27E-9	1.96E-8	6.55E-11	-1.21E-7	1.42E-7
AP	mol H+ eq	2.15E-3	3.64E-5	1.18E-4	2.31E-3	3.15E-5	3.35E-4	1.59E-6	-1.06E-3	1.62E-3
EP-fw	kg P eq	2.20E-5	6.34E-8	3.39E-7	2.24E-5	4.55E-8	2.35E-6	2.08E-9	-1.17E-5	1.31E-5
EP-m	kg N eq	3.96E-4	1.28E-5	2.79E-5	4.37E-4	1.13E-5	8.26E-5	9.87E-7	-1.92E-4	3.40E-4
EP-T	mol N eq	4.24E-3	1.42E-4	3.07E-4	4.69E-3	1.24E-4	9.10E-4	6.35E-6	-2.08E-3	3.65E-3
POCP	kg NMVOC eq	1.33E-3	4.04E-5	8.75E-5	1.46E-3	3.55E-5	2.72E-4	2.19E-6	-6.76E-4	1.10E-3
ADP-mm	kg Sb eq	4.36E-4	1.59E-7	6.75E-7	4.36E-4	1.43E-7	1.33E-6	1.60E-9	-5.07E-6	4.33E-4
ADP-f	MJ	1.10E+1	9.47E-2	2.16E-1	1.13E+1	8.49E-2	8.98E-1	4.78E-3	-6.02E+0	6.32E+0
WDP	m3 depriv.	7.25E-1	3.39E-4	1.67E-1	8.93E-1	2.60E-4	3.53E-2	3.10E-5	-3.91E-1	5.38E-1
PM	disease inc.	1.51E-8	5.64E-10	1.46E-9	1.71E-8	4.99E-10	4.15E-9	3.29E-11	-8.93E-9	1.29E-8
IR	kBq U-235 eq	2.55E-2	3.97E-4	3.44E-4	2.62E-2	3.71E-4	3.19E-3	2.20E-5	-1.31E-2	1.67E-2
ETP-fw	CTUe	1.50E+1	8.45E-2	5.02E-1	1.56E+1	6.89E-2	6.94E+0	7.64E-2	-5.91E+0	1.68E+1
HTP-c	CTUh	3.69E-10	2.74E-12	1.74E-11	3.89E-10	2.45E-12	1.00E-10	1.32E-13	-1.45E-10	3.47E-10
HTP-nc	CTUh	1.22E-8	9.24E-11	5.43E-10	1.28E-8	8.21E-11	2.41E-9	1.46E-11	-5.01E-9	1.03E-8
SQP	Pt	2.81E+0	8.22E-2	1.62E-2	2.91E+0	7.26E-2	5.47E-1	1.23E-2	-6.86E+0	-3.32E+0

Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	8.33E-1	1.19E-3	1.05E+0	1.89E+0	1.22E-3	6.45E-2	1.79E-4	-1.38E+0	5.69E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	8.33E-1	1.19E-3	1.05E+0	1.89E+0	1.22E-3	6.45E-2	1.79E-4	-1.38E+0	5.69E-1
PENRE	MJ	1.18E+1	1.01E-1	2.34E-1	1.22E+1	9.01E-2	9.56E-1	5.07E-3	-6.47E+0	6.75E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.18E+1	1.01E-1	2.34E-1	1.22E+1	9.01E-2	9.56E-1	5.07E-3	-6.47E+0	6.75E+0
PET	MJ	1.27E+1	1.02E-1	1.29E+0	1.41E+1	9.13E-2	1.02E+0	5.25E-3	-7.86E+0	7.32E+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	8.24E-3	1.15E-5	3.96E-3	1.22E-2	9.60E-6	9.68E-4	5.86E-6	-4.86E-3	8.34E-3
Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	6.28E-5	2.40E-7	2.30E-7	6.33E-5	2.17E-7	1.48E-6	5.82E-9	-5.16E-6	5.98E-5
NHWD	kg	4.78E-2	6.01E-3	3.55E-4	5.42E-2	5.26E-3	3.24E-2	2.10E-2	-2.09E-2	9.20E-2
RWD	kg	2.22E-5	6.22E-7	4.26E-7	2.33E-5	5.77E-7	3.44E-6	3.11E-8	-1.17E-5	1.56E-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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