

Environmental Profile

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

Ecochain v3.5.80



Product: 3004153 - PVC RWA Tee 45° GY 70 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	0.03	0	0	0.04	0	0.01	0	-0.02	0.03
ADPE	kg Sb-eq	3.03E-4	1.12E-7	4.70E-7	3.03E-4	9.94E-8	9.28E-7	1.11E-9	-3.54E-6	3.01E-4
ADPF	kg Sb-eq	3.63E-3	3.22E-5	8.08E-5	3.74E-3	2.80E-5	3.17E-4	1.54E-6	-1.99E-3	2.09E-3
GWP	kg CO2-eq	3.08E-1	4.38E-3	1.53E-2	3.28E-1	3.81E-3	1.08E-1	1.05E-3	-1.74E-1	2.67E-1
ODP	kg CFC-11-eq	1.69E-7	7.78E-10	1.21E-9	1.71E-7	7.07E-10	1.32E-8	3.67E-11	-8.54E-8	9.94E-8
POCP	kg ethene-eq	1.75E-4	2.65E-6	6.67E-6	1.85E-4	2.29E-6	2.55E-5	2.71E-7	-9.18E-5	1.21E-4
AP	kg SO2-eq	1.23E-3	1.93E-5	6.59E-5	1.32E-3	1.64E-5	1.86E-4	8.28E-7	-6.15E-4	9.08E-4
EP	kg PO4 3--eq	1.66E-4	3.79E-6	8.48E-6	1.78E-4	3.28E-6	2.85E-5	3.26E-7	-8.99E-5	1.20E-4
HTP	kg 1,4-DB-eq	1.20E-1	1.85E-3	7.13E-3	1.29E-1	1.63E-3	4.82E-2	8.69E-5	-5.78E-2	1.21E-1
FAETP	kg 1,4-DB-eq	3.96E-3	5.39E-5	2.43E-4	4.26E-3	4.78E-5	7.41E-4	2.68E-5	-1.87E-3	3.20E-3
MAETP	kg 1,4-DB-eq	8.51E+0	1.94E-1	9.59E-1	9.67E+0	1.71E-1	2.60E+0	3.27E-2	-3.75E+0	8.73E+0
TETP	kg 1,4-DB-eq	9.08E-4	6.53E-6	5.30E-4	1.44E-3	5.78E-6	1.70E-4	2.92E-7	-6.27E-4	9.94E-4
Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	3.19E-1	4.43E-3	1.76E-2	3.41E-1	3.85E-3	1.20E-1	1.22E-3	-1.52E-1	3.14E-1
GWP-f	kg CO2 eq	3.15E-1	4.42E-3	1.35E-2	3.33E-1	3.84E-3	1.08E-1	1.22E-3	-1.77E-1	2.69E-1
GWP-b	kg CO2 eq	3.20E-3	2.04E-6	2.78E-3	5.99E-3	2.33E-6	1.17E-2	1.54E-6	2.58E-2	4.35E-2
GWP-luluc	kg CO2 eq	4.10E-4	1.62E-6	1.28E-3	1.69E-3	1.36E-6	4.89E-5	3.20E-8	-2.94E-4	1.45E-3
ODP	kg CFC11 eq	1.67E-7	9.76E-10	1.43E-9	1.69E-7	8.86E-10	1.36E-8	4.55E-11	-8.46E-8	9.92E-8
AP	mol H+ eq	1.51E-3	2.56E-5	8.22E-5	1.62E-3	2.19E-5	2.34E-4	1.11E-6	-7.47E-4	1.13E-3
EP-fw	kg P eq	1.55E-5	4.46E-8	2.36E-7	1.58E-5	3.16E-8	1.64E-6	1.45E-9	-8.39E-6	9.04E-6
EP-m	kg N eq	2.81E-4	9.04E-6	1.94E-5	3.09E-4	7.83E-6	5.79E-5	6.87E-7	-1.36E-4	2.39E-4
EP-T	mol N eq	3.00E-3	9.96E-5	2.14E-4	3.31E-3	8.63E-5	6.38E-4	4.42E-6	-1.48E-3	2.56E-3
POCP	kg NMVOC eq	9.39E-4	2.84E-5	6.10E-5	1.03E-3	2.47E-5	1.91E-4	1.52E-6	-4.79E-4	7.67E-4
ADP-mm	kg Sb eq	3.03E-4	1.12E-7	4.70E-7	3.03E-4	9.94E-8	9.28E-7	1.11E-9	-3.54E-6	3.01E-4
ADP-f	MJ	7.72E+0	6.67E-2	1.51E-1	7.94E+0	5.90E-2	6.27E-1	3.32E-3	-4.21E+0	4.42E+0
WDP	m3 depriv.	5.05E-1	2.39E-4	1.17E-1	6.22E-1	1.81E-4	2.45E-2	2.15E-5	-2.76E-1	3.71E-1
PM	disease inc.	1.07E-8	3.97E-10	1.02E-9	1.21E-8	3.47E-10	2.91E-9	2.29E-11	-6.47E-9	8.94E-9
IR	kBq U-235 eq	1.78E-2	2.79E-4	2.40E-4	1.83E-2	2.58E-4	2.23E-3	1.53E-5	-9.30E-3	1.16E-2
ETP-fw	CTUe	1.08E+1	5.95E-2	3.50E-1	1.12E+1	4.79E-2	4.83E+0	5.31E-2	-4.32E+0	1.18E+1
HTP-c	CTUh	2.58E-10	1.93E-12	1.21E-11	2.72E-10	1.70E-12	7.02E-11	9.19E-14	-1.02E-10	2.42E-10
HTP-nc	CTUh	8.50E-9	6.51E-11	3.79E-10	8.95E-9	5.71E-11	1.68E-9	1.02E-11	-3.54E-9	7.15E-9
SQP	Pt	2.07E+0	5.79E-2	1.13E-2	2.14E+0	5.05E-2	3.82E-1	8.52E-3	-5.26E+0	-2.68E+0

Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	6.02E-1	8.35E-4	7.33E-1	1.34E+0	8.46E-4	4.49E-2	1.24E-4	-1.05E+0	3.33E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	6.02E-1	8.35E-4	7.33E-1	1.34E+0	8.46E-4	4.49E-2	1.24E-4	-1.05E+0	3.33E-1
PENRE	MJ	8.28E+0	7.08E-2	1.63E-1	8.52E+0	6.26E-2	6.67E-1	3.53E-3	-4.53E+0	4.72E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	8.28E+0	7.08E-2	1.63E-1	8.52E+0	6.26E-2	6.67E-1	3.53E-3	-4.53E+0	4.72E+0
PET	MJ	8.89E+0	7.16E-2	8.96E-1	9.85E+0	6.35E-2	7.12E-1	3.65E-3	-5.58E+0	5.05E+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	5.77E-3	8.12E-6	2.76E-3	8.54E-3	6.68E-6	6.74E-4	4.07E-6	-3.48E-3	5.74E-3
Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	4.37E-5	1.69E-7	1.60E-7	4.41E-5	1.51E-7	1.04E-6	4.05E-9	-3.63E-6	4.16E-5
NHWD	kg	3.37E-2	4.23E-3	2.47E-4	3.82E-2	3.66E-3	2.27E-2	1.46E-2	-1.47E-2	6.44E-2
RWD	kg	1.56E-5	4.38E-7	2.97E-7	1.63E-5	4.01E-7	2.41E-6	2.16E-8	-8.31E-6	1.08E-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



Ecochain Technologies BV
H.J.E. Wenckebachweg 123, 1096 AM Amsterdam, The Netherlands
<https://www.ecochain.com>
+31 20 3035 777