

Environmental Profile

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

Ecochain v3.5.80



Product: 3004231 - PVC RWA Tee 87.3° WT 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	0.06	0	0	0.07	0	0.02	0	-0.03	0.06
ADPE	kg Sb-eq	7.11E-4	1.95E-7	7.71E-7	7.12E-4	1.78E-7	1.63E-6	2.03E-9	-6.32E-6	7.07E-4
ADPF	kg Sb-eq	6.59E-3	5.61E-5	1.33E-4	6.78E-3	5.02E-5	5.59E-4	2.77E-6	-3.54E-3	3.85E-3
GWP	kg CO2-eq	5.79E-1	7.63E-3	2.51E-2	6.11E-1	6.84E-3	1.92E-1	1.91E-3	-3.08E-1	5.05E-1
ODP	kg CFC-11-eq	2.87E-7	1.35E-9	1.99E-9	2.90E-7	1.27E-9	2.30E-8	6.59E-11	-1.53E-7	1.62E-7
POCP	kg ethene-eq	3.50E-4	4.61E-6	1.09E-5	3.66E-4	4.11E-6	4.51E-5	4.93E-7	-1.62E-4	2.53E-4
AP	kg SO2-eq	2.41E-3	3.36E-5	1.08E-4	2.55E-3	2.94E-5	3.27E-4	1.50E-6	-1.08E-3	1.82E-3
EP	kg PO4 3--eq	3.15E-4	6.59E-6	1.39E-5	3.36E-4	5.88E-6	5.01E-5	5.80E-7	-1.56E-4	2.36E-4
HTP	kg 1,4-DB-eq	2.17E-1	3.21E-3	1.17E-2	2.32E-1	2.93E-3	8.56E-2	1.56E-4	-1.02E-1	2.19E-1
FAETP	kg 1,4-DB-eq	7.37E-3	9.38E-5	3.99E-4	7.87E-3	8.57E-5	1.31E-3	4.85E-5	-3.22E-3	6.09E-3
MAETP	kg 1,4-DB-eq	1.57E+1	3.37E-1	1.57E+0	1.76E+1	3.06E-1	4.59E+0	5.96E-2	-6.63E+0	1.60E+1
TETP	kg 1,4-DB-eq	1.58E-3	1.14E-5	8.69E-4	2.46E-3	1.04E-5	3.02E-4	5.26E-7	-1.08E-3	1.70E-3
Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	5.99E-1	7.70E-3	2.88E-2	6.35E-1	6.90E-3	2.12E-1	2.22E-3	-2.73E-1	5.84E-1
GWP-f	kg CO2 eq	5.92E-1	7.70E-3	2.21E-2	6.22E-1	6.90E-3	1.93E-1	2.22E-3	-3.14E-1	5.10E-1
GWP-b	kg CO2 eq	5.87E-3	3.55E-6	4.56E-3	1.04E-2	4.19E-6	1.89E-2	2.75E-6	4.16E-2	7.10E-2
GWP-luluc	kg CO2 eq	7.18E-4	2.82E-6	2.10E-3	2.82E-3	2.44E-6	8.59E-5	5.99E-8	-4.95E-4	2.41E-3
ODP	kg CFC11 eq	2.83E-7	1.70E-9	2.34E-9	2.87E-7	1.59E-9	2.38E-8	8.18E-11	-1.51E-7	1.62E-7
AP	mol H+ eq	2.94E-3	4.46E-5	1.35E-4	3.12E-3	3.93E-5	4.11E-4	2.00E-6	-1.32E-3	2.25E-3
EP-fw	kg P eq	2.86E-5	7.76E-8	3.87E-7	2.91E-5	5.68E-8	2.88E-6	2.68E-9	-1.46E-5	1.74E-5
EP-m	kg N eq	5.41E-4	1.57E-5	3.19E-5	5.88E-4	1.41E-5	1.02E-4	1.22E-6	-2.39E-4	4.66E-4
EP-T	mol N eq	5.69E-3	1.73E-4	3.51E-4	6.21E-3	1.55E-4	1.12E-3	7.96E-6	-2.59E-3	4.91E-3
POCP	kg NMVOC eq	1.83E-3	4.95E-5	9.99E-5	1.98E-3	4.43E-5	3.36E-4	2.74E-6	-8.44E-4	1.52E-3
ADP-mm	kg Sb eq	7.11E-4	1.95E-7	7.71E-7	7.12E-4	1.78E-7	1.63E-6	2.03E-9	-6.32E-6	7.07E-4
ADP-f	MJ	1.40E+1	1.16E-1	2.47E-1	1.44E+1	1.06E-1	1.11E+0	5.99E-3	-7.49E+0	8.08E+0
WDP	m3 depriv.	8.77E-1	4.15E-4	1.91E-1	1.07E+0	3.25E-4	4.29E-2	4.70E-5	-4.88E-1	6.25E-1
PM	disease inc.	2.08E-8	6.91E-10	1.66E-9	2.31E-8	6.23E-10	5.13E-9	4.12E-11	-1.12E-8	1.78E-8
IR	kBq U-235 eq	3.12E-2	4.86E-4	3.93E-4	3.20E-2	4.63E-4	3.92E-3	2.74E-5	-1.64E-2	2.01E-2
ETP-fw	CTUe	2.02E+1	1.04E-1	5.74E-1	2.09E+1	8.60E-2	8.39E+0	9.22E-2	-7.39E+0	2.21E+1
HTP-c	CTUh	4.96E-10	3.36E-12	1.99E-11	5.20E-10	3.06E-12	1.29E-10	1.71E-13	-1.81E-10	4.71E-10
HTP-nc	CTUh	1.59E-8	1.13E-10	6.21E-10	1.67E-8	1.02E-10	2.96E-9	1.78E-11	-6.26E-9	1.35E-8
SQP	Pt	3.52E+0	1.01E-1	1.85E-2	3.64E+0	9.06E-2	6.78E-1	1.53E-2	-8.58E+0	-4.16E+0

Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.03E+0	1.45E-3	1.20E+0	2.23E+0	1.52E-3	7.89E-2	2.19E-4	-1.73E+0	5.85E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.03E+0	1.45E-3	1.20E+0	2.23E+0	1.52E-3	7.89E-2	2.19E-4	-1.73E+0	5.85E-1
PENRE	MJ	1.50E+1	1.23E-1	2.67E-1	1.54E+1	1.12E-1	1.18E+0	6.35E-3	-8.06E+0	8.64E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.50E+1	1.23E-1	2.67E-1	1.54E+1	1.12E-1	1.18E+0	6.35E-3	-8.06E+0	8.64E+0
PET	MJ	1.60E+1	1.25E-1	1.47E+0	1.76E+1	1.14E-1	1.26E+0	6.57E-3	-9.79E+0	9.23E+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	1.04E-2	1.41E-5	4.52E-3	1.49E-2	1.20E-5	1.18E-3	7.29E-6	-6.06E-3	1.00E-2
Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	9.92E-5	2.94E-7	2.63E-7	9.98E-5	2.71E-7	1.83E-6	7.36E-9	-6.42E-6	9.55E-5
NHWD	kg	5.99E-2	7.36E-3	4.05E-4	6.76E-2	6.56E-3	4.03E-2	2.62E-2	-2.61E-2	1.15E-1
RWD	kg	2.71E-5	7.62E-7	4.87E-7	2.84E-5	7.20E-7	4.24E-6	3.88E-8	-1.46E-5	1.87E-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