

Environmental Profile

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

Ecochain v3.5.80



Product: 3004228 - PVC RWA Tee 45° WT 80 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]

Statement of Confidentiality

This document and supporting material contain confidential and proprietary business information of Wavin - NL - Hardenberg - Verified. These materials may be printed or (photo) copied or otherwise used only with the written consent of Wavin - NL - Hardenberg - Verified.

Results

Environmental impact SBK set 1	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
ECI	euro	0.05	0	0	0.06	0	0.02	0	-0.03	0.05
ADPE	kg Sb-eq	5.91E-4	1.62E-7	6.88E-7	5.92E-4	1.48E-7	1.35E-6	1.69E-9	-5.25E-6	5.89E-4
ADPF	kg Sb-eq	5.48E-3	4.65E-5	1.18E-4	5.64E-3	4.18E-5	4.65E-4	2.31E-6	-2.94E-3	3.21E-3
GWP	kg CO2-eq	4.80E-1	6.32E-3	2.24E-2	5.09E-1	5.69E-3	1.60E-1	1.59E-3	-2.55E-1	4.21E-1
ODP	kg CFC-11-eq	2.39E-7	1.12E-9	1.77E-9	2.41E-7	1.06E-9	1.91E-8	5.48E-11	-1.27E-7	1.35E-7
POCP	kg ethene-eq	2.91E-4	3.82E-6	9.74E-6	3.05E-4	3.42E-6	3.74E-5	4.10E-7	-1.35E-4	2.11E-4
AP	kg SO2-eq	2.00E-3	2.78E-5	9.64E-5	2.12E-3	2.45E-5	2.72E-4	1.24E-6	-8.98E-4	1.52E-3
EP	kg PO4 3--eq	2.61E-4	5.46E-6	1.24E-5	2.79E-4	4.89E-6	4.16E-5	4.83E-7	-1.28E-4	1.97E-4
HTP	kg 1,4-DB-eq	1.81E-1	2.66E-3	1.04E-2	1.94E-1	2.43E-3	7.11E-2	1.30E-4	-8.48E-2	1.83E-1
FAETP	kg 1,4-DB-eq	6.09E-3	7.77E-5	3.56E-4	6.52E-3	7.13E-5	1.09E-3	4.04E-5	-2.64E-3	5.08E-3
MAETP	kg 1,4-DB-eq	1.31E+1	2.80E-1	1.40E+0	1.47E+1	2.55E-1	3.80E+0	4.96E-2	-5.49E+0	1.34E+1
TETP	kg 1,4-DB-eq	1.31E-3	9.41E-6	7.75E-4	2.10E-3	8.63E-6	2.52E-4	4.37E-7	-8.84E-4	1.47E-3
Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	4.97E-1	6.38E-3	2.57E-2	5.29E-1	5.74E-3	1.76E-1	1.85E-3	-2.28E-1	4.85E-1
GWP-f	kg CO2 eq	4.92E-1	6.38E-3	1.97E-2	5.18E-1	5.74E-3	1.61E-1	1.85E-3	-2.61E-1	4.26E-1
GWP-b	kg CO2 eq	4.86E-3	2.94E-6	4.07E-3	8.94E-3	3.48E-6	1.51E-2	2.29E-6	3.32E-2	5.72E-2
GWP-luluc	kg CO2 eq	5.89E-4	2.34E-6	1.87E-3	2.46E-3	2.03E-6	7.15E-5	4.98E-8	-4.02E-4	2.14E-3
ODP	kg CFC11 eq	2.36E-7	1.41E-9	2.08E-9	2.39E-7	1.32E-9	1.98E-8	6.81E-11	-1.26E-7	1.34E-7
AP	mol H+ eq	2.44E-3	3.70E-5	1.20E-4	2.60E-3	3.27E-5	3.41E-4	1.66E-6	-1.09E-3	1.88E-3
EP-fw	kg P eq	2.38E-5	6.43E-8	3.45E-7	2.42E-5	4.72E-8	2.39E-6	2.23E-9	-1.21E-5	1.45E-5
EP-m	kg N eq	4.48E-4	1.30E-5	2.84E-5	4.89E-4	1.17E-5	8.44E-5	1.01E-6	-1.98E-4	3.89E-4
EP-T	mol N eq	4.72E-3	1.44E-4	3.13E-4	5.17E-3	1.29E-4	9.30E-4	6.62E-6	-2.14E-3	4.10E-3
POCP	kg NMVOC eq	1.52E-3	4.10E-5	8.91E-5	1.65E-3	3.68E-5	2.79E-4	2.28E-6	-6.97E-4	1.27E-3
ADP-mm	kg Sb eq	5.91E-4	1.62E-7	6.88E-7	5.92E-4	1.48E-7	1.35E-6	1.69E-9	-5.25E-6	5.89E-4
ADP-f	MJ	1.16E+1	9.62E-2	2.20E-1	1.19E+1	8.81E-2	9.20E-1	4.98E-3	-6.22E+0	6.73E+0
WDP	m3 depriv.	7.30E-1	3.44E-4	1.71E-1	9.01E-1	2.70E-4	3.57E-2	3.91E-5	-4.04E-1	5.33E-1
PM	disease inc.	1.72E-8	5.73E-10	1.48E-9	1.93E-8	5.18E-10	4.26E-9	3.43E-11	-9.15E-9	1.49E-8
IR	kBq U-235 eq	2.59E-2	4.03E-4	3.50E-4	2.66E-2	3.85E-4	3.26E-3	2.28E-5	-1.35E-2	1.67E-2
ETP-fw	CTUe	1.67E+1	8.58E-2	5.12E-1	1.72E+1	7.15E-2	6.97E+0	7.67E-2	-6.04E+0	1.83E+1
HTP-c	CTUh	4.13E-10	2.78E-12	1.77E-11	4.33E-10	2.55E-12	1.07E-10	1.42E-13	-1.50E-10	3.93E-10
HTP-nc	CTUh	1.32E-8	9.38E-11	5.53E-10	1.39E-8	8.53E-11	2.46E-9	1.48E-11	-5.18E-9	1.13E-8
SQP	Pt	2.87E+0	8.34E-2	1.65E-2	2.97E+0	7.54E-2	5.64E-1	1.27E-2	-6.89E+0	-3.26E+0

Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	8.45E-1	1.20E-3	1.07E+0	1.92E+0	1.26E-3	6.56E-2	1.82E-4	-1.39E+0	5.94E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	8.45E-1	1.20E-3	1.07E+0	1.92E+0	1.26E-3	6.56E-2	1.82E-4	-1.39E+0	5.94E-1
PENRE	MJ	1.25E+1	1.02E-1	2.38E-1	1.28E+1	9.35E-2	9.78E-1	5.28E-3	-6.69E+0	7.20E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.25E+1	1.02E-1	2.38E-1	1.28E+1	9.35E-2	9.78E-1	5.28E-3	-6.69E+0	7.20E+0
PET	MJ	1.33E+1	1.03E-1	1.31E+0	1.47E+1	9.48E-2	1.04E+0	5.47E-3	-8.09E+0	7.79E+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	8.61E-3	1.17E-5	4.03E-3	1.27E-2	9.97E-6	9.80E-4	6.07E-6	-4.99E-3	8.66E-3
Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	8.26E-5	2.44E-7	2.34E-7	8.30E-5	2.25E-7	1.52E-6	6.12E-9	-5.33E-6	7.95E-5
NHWD	kg	4.97E-2	6.10E-3	3.61E-4	5.62E-2	5.46E-3	3.35E-2	2.18E-2	-2.16E-2	9.54E-2
RWD	kg	2.25E-5	6.32E-7	4.34E-7	2.36E-5	5.99E-7	3.52E-6	3.23E-8	-1.21E-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



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