Environmental Profile

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

Ecochain v3.5.80

Product:	3003170 - Wadal PVC Tee 88° GY 75x50 S/S/S
Unit:	1 piece
Manufacturer:	Wavin - NL - Hardenberg - Verified
Address:	J.C. Kellerlaan 3 7772 SG Hardenberg Netherlands

With Wadal you opt for a tensile-resistant system whose connections cannot slide apart. There is a solution for every indoor drainage situation, thanks to the very extensive range of PVC adhesive fittings and pipes. KOMO certified.

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

A1 Raw material supply A2 Transport A3 Manufacturing

Construction process stage

A4 Transport gate to site
A5 Assembly / Construction installation process

Use stage

B1 Use B2 Maintenance B3 Repair B4 Replacement B5 Refurbishment
B6 Operational energy use B7 Operational water use

End-of-Life stage

C1 De-construction demolition C2 Transport C3 Waste processing
C4 Disposal

Benefits and loads beyond the system boundaries

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

Results

Environmental impact SBK set 1	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
ECI	euro	0.04	0	0	0.04	0	0.01	0	-0.02	0.03
ADPE	kg Sb-eq	3.32E-4	1.18E-7	5.14E-7	3.32E-4	1.09E-7	9.97E-7	1.22E-9	-3.82E-6	3.30E-4
ADPF	kg Sb-eq	3.91E-3	3.40E-5	8.83E-5	4.03E-3	3.07E-5	3.43E-4	1.69E-6	-2.15E-3	2.26E-3
GWP	kg CO2-eq	3.29E-1	4.62E-3	1.68E-2	3.50E-1	4.18E-3	1.17E-1	1.15E-3	-1.85E-1	2.88E-1
ODP	kg CFC-11-eq	1.84E-7	8.19E-10	1.33E-9	1.86E-7	7.75E-10	1.44E-8	4.02E-11	-9.29E-8	1.08E-7
POCP	kg ethene-eq	1.88E-4	2.79E-6	7.28E-6	1.98E-4	2.51E-6	2.73E-5	2.97E-7	-9.65E-5	1.32E-4
AP	kg SO2-eq	1.32E-3	2.03E-5	7.21E-5	1.41E-3	1.80E-5	2.01E-4	9.07E-7	-6.38E-4	9.92E-4
EP	kg PO4 3−-eq	1.72E-4	3.99E-6	9.27E-6	1.85E-4	3.59E-6	3.05E-5	3.58E-7	-8.83E-5	1.31E-4
HTP	kg 1,4-DB-eq	1.28E-1	1.94E-3	7.79E-3	1.38E-1	1.79E-3	5.22E-2	9.53E-5	-6.07E-2	1.32E-1
FAETP	kg 1,4-DB-eq	3.99E-3	5.68E-5	2.66E-4	4.31E-3	5.23E-5	7.96E-4	2.93E-5	-1.78E-3	3.41E-3
MAETP	kg 1,4-DB-eq	9.09E+0	2.04E-1	1.05E+0	1.03E+1	1.87E-1	2.76E+0	3.59E-2	-3.93E+0	9.40E+0
TETP	kg 1,4-DB-eq	9.58E-4	6.87E-6	5.79E-4	1.54E-3	6.33E-6	1.85E-4	3.20E-7	-5.94E-4	1.14E-3
Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	3.40E-1	4.66E-3	1.92E-2	3.64E-1	4.22E-3	1.26E-1	1.34E-3	-1.71E-1	3.25E-1
GWP-f	kg CO2 eq	3.36E-1	4.66E-3	1.47E-2	3.56E-1	4.21E-3	1.18E-1	1.34E-3	-1.89E-1	2.90E-1
GWP-b	kg CO2 eq	3.37E-3	2.15E-6	3.04E-3	6.42E-3	2.56E-6	8.59E-3	1.69E-6	1.87E-2	3.37E-2
GWP-luluc	kg CO2 eq	3.96E-4	1.71E-6	1.40E-3	1.80E-3	1.49E-6	5.33E-5	3.51E-8	-2.55E-4	1.60E-3
ODP	kg CFC11 eq	1.82E-7	1.03E-9	1.56E-9	1.84E-7	9.71E-10	1.48E-8	4.99E-11	-9.20E-8	1.08E-7
AP	mol H+ eq	1.61E-3	2.70E-5	8.99E-5	1.72E-3	2.40E-5	2.52E-4	1.21E-6	-7.73E-4	1.23E-3
EP-fw	kg P eq	1.64E-5	4.70E-8	2.58E-7	1.67E-5	3.47E-8	1.79E-6	1.59E-9	-8.36E-6	1.01E-5
EP-m	kg N eq	2.91E-4	9.52E-6	2.12E-5	3.22E-4	8.58E-6	6.17E-5	7.52E-7	-1.39E-4	2.54E-4
EP-T	mol N eq	3.13E-3	1.05E-4	2.34E-4	3.47E-3	9.46E-5	6.80E-4	4.84E-6	-1.50E-3	2.75E-3
POCP	kg NMVOC eq	9.95E-4	3.00E-5	6.66E-5	1.09E-3	2.70E-5	2.04E-4	1.67E-6	-4.95E-4	8.29E-4
ADP-mm	kg Sb eq	3.32E-4	1.18E-7	5.14E-7	3.32E-4	1.09E-7	9.97E-7	1.22E-9	-3.82E-6	3.30E-4
ADP-f	MJ	8.33E+0	7.02E-2	1.65E-1	8.56E+0	6.47E-2	6.78E-1	3.64E-3	-4.53E+0	4.79E+0
WDP	m3 depriv.	5.50E-1	2.51E-4	1.28E-1	6.78E-1	1.98E-4	2.68E-2	2.36E-5	-2.88E-1	4.17E-1
PM	disease inc.	1.10E-8	4.18E-10	1.11E-9	1.25E-8	3.80E-10	3.12E-9	2.51E-11	-6.18E-9	9.87E-9
IR	kBq U-235 eq	1.91E-2	2.94E-4	2.62E-4	1.97E-2	2.83E-4	2.41E-3	1.67E-5	-9.59E-3	1.28E-2
ETP-fw	CTUe	1.06E+1	6.26E-2	3.83E-1	1.11E+1	5.25E-2	5.27E+0	5.82E-2	-4.00E+0	1.25E+1
HTP-c	CTUh	2.78E-10	2.03E-12	1.33E-11	2.93E-10	1.87E-12	7.55E-11	1.01E-13	-1.07E-10	2.64E-10
HTP-nc	CTUh	9.18E-9	6.85E-11	4.14E-10	9.66E-9	6.26E-11	1.83E-9	1.11E-11	-3.69E-9	7.87E-9
SQP	Pt	1.88E+0	6.09E-2	1.23E-2	1.95E+0	5.53E-2	4.13E-1	9.33E-3	-4.03E+0	-1.60E+0

Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	5.79E-1	8.79E-4	8.01E-1	1.38E+0	9.27E-4	4.90E-2	1.36E-4	-8.36E-1	5.96E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	5.79E-1	8.79E-4	8.01E-1	1.38E+0	9.27E-4	4.90E-2	1.36E-4	-8.36E-1	5.96E-1
PENRE	MJ	8.94E+0	7.46E-2	1.78E-1	9.19E+0	6.86E-2	7.22E-1	3.87E-3	-4.87E+0	5.11E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	8.94E+0	7.46E-2	1.78E-1	9.19E+0	6.86E-2	7.22E-1	3.87E-3	-4.87E+0	5.11E+0
PET	MJ	9.51E+0	7.55E-2	9.80E-1	1.06E+1	6.96E-2	7.71E-1	4.00E-3	-5.71E+0	5.71E+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	6.20E-3	8.56E-6	3.02E-3	9.23E-3	7.32E-6	7.35E-4	4.46E-6	-3.45E-3	6.52E-3
Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	4.77E-5	1.78E-7	1.75E-7	4.81E-5	1.65E-7	1.11E-6	4.44E-9	-3.85E-6	4.55E-5
NHWD	kg	3.53E-2	4.46E-3	2.70E-4	4.00E-2	4.01E-3	2.45E-2	1.60E-2	-1.54E-2	6.92E-2
RWD	kg	1.66E-5	4.61E-7	3.24E-7	1.74E-5	4.40E-7	2.58E-6	2.37E-8	-8.54E-6	1.19E-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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