Environmental Profile

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

Ecochain v3.5.80

Product:	3003169 - Wadal PVC Tee 45° 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	0.05	0	0	0.05	0	0.02	0	-0.02	0.04
ADPE	kg Sb-eq	4.31E-4	1.52E-7	7.07E-7	4.32E-4	1.42E-7	1.29E-6	1.58E-9	-4.94E-6	4.29E-4
ADPF	kg Sb-eq	5.06E-3	4.37E-5	1.21E-4	5.22E-3	3.99E-5	4.44E-4	2.19E-6	-2.77E-3	2.93E-3
GWP	kg CO2-eq	4.24E-1	5.94E-3	2.31E-2	4.53E-1	5.43E-3	1.52E-1	1.49E-3	-2.38E-1	3.73E-1
ODP	kg CFC-11-eq	2.39E-7	1.05E-9	1.82E-9	2.42E-7	1.01E-9	1.87E-8	5.22E-11	-1.21E-7	1.41E-7
POCP	kg ethene-eq	2.43E-4	3.58E-6	1.00E-5	2.56E-4	3.26E-6	3.52E-5	3.87E-7	-1.24E-4	1.71E-4
AP	kg SO2-eq	1.70E-3	2.61E-5	9.91E-5	1.83E-3	2.34E-5	2.60E-4	1.18E-6	-8.17E-4	1.29E-3
EP	kg PO4 3−-eq	2.20E-4	5.13E-6	1.27E-5	2.37E-4	4.67E-6	3.94E-5	4.65E-7	-1.11E-4	1.71E-4
HTP	kg 1,4-DB-eq	1.66E-1	2.50E-3	1.07E-2	1.79E-1	2.32E-3	6.76E-2	1.24E-4	-7.79E-2	1.71E-1
FAETP	kg 1,4-DB-eq	5.06E-3	7.30E-5	3.66E-4	5.49E-3	6.81E-5	1.03E-3	3.81E-5	-2.21E-3	4.42E-3
MAETP	kg 1,4-DB-eq	1.17E+1	2.62E-1	1.44E+0	1.34E+1	2.43E-1	3.55E+0	4.66E-2	-5.04E+0	1.22E+1
TETP	kg 1,4-DB-eq	1.23E-3	8.83E-6	7.96E-4	2.04E-3	8.23E-6	2.40E-4	4.17E-7	-7.39E-4	1.55E-3
Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	4.39E-1	5.99E-3	2.64E-2	4.71E-1	5.48E-3	1.62E-1	1.74E-3	-2.23E-1	4.18E-1
GWP-f	kg CO2 eq	4.34E-1	5.99E-3	2.03E-2	4.60E-1	5.47E-3	1.53E-1	1.74E-3	-2.44E-1	3.76E-1
GWP-b	kg CO2 eq	4.34E-3	2.76E-6	4.18E-3	8.53E-3	3.32E-6	9.67E-3	2.20E-6	2.08E-2	3.90E-2
GWP-luluc	kg CO2 eq	4.95E-4	2.19E-6	1.92E-3	2.42E-3	1.94E-6	6.92E-5	4.56E-8	-3.08E-4	2.19E-3
ODP	kg CFC11 eq	2.36E-7	1.32E-9	2.14E-9	2.39E-7	1.26E-9	1.92E-8	6.48E-11	-1.19E-7	1.40E-7
AP	mol H+ eq	2.07E-3	3.47E-5	1.24E-4	2.23E-3	3.12E-5	3.26E-4	1.58E-6	-9.89E-4	1.60E-3
EP-fw	kg P eq	2.10E-5	6.04E-8	3.55E-7	2.15E-5	4.51E-8	2.32E-6	2.06E-9	-1.06E-5	1.33E-5
EP-m	kg N eq	3.72E-4	1.22E-5	2.92E-5	4.14E-4	1.12E-5	7.96E-5	9.78E-7	-1.77E-4	3.29E-4
EP-T	mol N eq	4.01E-3	1.35E-4	3.22E-4	4.47E-3	1.23E-4	8.77E-4	6.29E-6	-1.90E-3	3.57E-3
POCP	kg NMVOC eq	1.28E-3	3.85E-5	9.16E-5	1.41E-3	3.52E-5	2.62E-4	2.17E-6	-6.33E-4	1.08E-3
ADP-mm	kg Sb eq	4.31E-4	1.52E-7	7.07E-7	4.32E-4	1.42E-7	1.29E-6	1.58E-9	-4.94E-6	4.29E-4
ADP-f	MJ	1.08E+1	9.03E-2	2.27E-1	1.11E+1	8.40E-2	8.79E-1	4.74E-3	-5.85E+0	6.21E+0
WDP	m3 depriv.	7.14E-1	3.23E-4	1.75E-1	8.90E-1	2.58E-4	3.48E-2	3.07E-5	-3.70E-1	5.55E-1
PM	disease inc.	1.40E-8	5.38E-10	1.53E-9	1.61E-8	4.94E-10	4.03E-9	3.26E-11	-7.71E-9	1.29E-8
IR	kBq U-235 eq	2.47E-2	3.78E-4	3.60E-4	2.54E-2	3.67E-4	3.11E-3	2.18E-5	-1.23E-2	1.67E-2
ETP-fw	CTUe	1.34E+1	8.05E-2	5.26E-1	1.40E+1	6.82E-2	6.85E+0	7.56E-2	-4.94E+0	1.61E+1
HTP-c	CTUh	3.60E-10	2.61E-12	1.82E-11	3.81E-10	2.43E-12	9.77E-11	1.31E-13	-1.37E-10	3.44E-10
HTP-nc	CTUh	1.19E-8	8.81E-11	5.69E-10	1.25E-8	8.14E-11	2.37E-9	1.45E-11	-4.73E-9	1.03E-8
SQP	Pt	2.31E+0	7.83E-2	1.69E-2	2.40E+0	7.19E-2	5.36E-1	1.21E-2	-4.63E+0	-1.61E+0

Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	7.24E-1	1.13E-3	1.10E+0	1.83E+0	1.21E-3	6.36E-2	1.77E-4	-9.75E-1	9.17E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	7.24E-1	1.13E-3	1.10E+0	1.83E+0	1.21E-3	6.36E-2	1.77E-4	-9.75E-1	9.17E-1
PENRE	MJ	1.16E+1	9.59E-2	2.45E-1	1.19E+1	8.92E-2	9.35E-1	5.03E-3	-6.30E+0	6.63E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.16E+1	9.59E-2	2.45E-1	1.19E+1	8.92E-2	9.35E-1	5.03E-3	-6.30E+0	6.63E+0
PET	MJ	1.23E+1	9.70E-2	1.35E+0	1.37E+1	9.04E-2	9.99E-1	5.20E-3	-7.27E+0	7.55E+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	8.01E-3	1.10E-5	4.15E-3	1.22E-2	9.51E-6	9.54E-4	5.80E-6	-4.36E-3	8.78E-3
Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	6.20E-5	2.29E-7	2.41E-7	6.25E-5	2.15E-7	1.44E-6	5.77E-9	-4.96E-6	5.92E-5
NHWD	kg	4.54E-2	5.73E-3	3.72E-4	5.15E-2	5.21E-3	3.17E-2	2.08E-2	-1.97E-2	8.95E-2
RWD	kg	2.15E-5	5.93E-7	4.46E-7	2.25E-5	5.72E-7	3.34E-6	3.08E-8	-1.09E-5	1.55E-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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