Environmental Profile

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

Ecochain v3.5.80

Product:	3003195 - Wadal PVC Tee 45° GY 160x125 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	0.27	0	0.02	0.29	0	0.09	0	-0.14	0.24
ADPE	kg Sb-eq	2.38E-3	8.63E-7	3.69E-6	2.39E-3	7.83E-7	7.23E-6	8.74E-9	-2.76E-5	2.37E-3
ADPF	kg Sb-eq	2.83E-2	2.48E-4	6.35E-4	2.92E-2	2.20E-4	2.48E-3	1.21E-5	-1.55E-2	1.63E-2
GWP	kg CO2-eq	2.39E+0	3.38E-2	1.20E-1	2.55E+0	3.00E-2	8.42E-1	8.24E-3	-1.35E+0	2.08E+0
ODP	kg CFC-11-eq	1.33E-6	5.99E-9	9.53E-9	1.34E-6	5.57E-9	1.04E-7	2.89E-10	-6.70E-7	7.81E-7
POCP	kg ethene-eq	1.36E-3	2.04E-5	5.24E-5	1.43E-3	1.80E-5	1.98E-4	2.14E-6	-7.07E-4	9.46E-4
AP	kg SO2-eq	9.57E-3	1.49E-4	5.18E-4	1.02E-2	1.29E-4	1.45E-3	6.52E-6	-4.70E-3	7.13E-3
EP	kg PO4 3−-eq	1.27E-3	2.92E-5	6.66E-5	1.36E-3	2.58E-5	2.21E-4	2.57E-6	-6.68E-4	9.44E-4
HTP	kg 1,4-DB-eq	9.32E-1	1.42E-2	5.60E-2	1.00E+0	1.28E-2	3.77E-1	6.85E-4	-4.45E-1	9.48E-1
FAETP	kg 1,4-DB-eq	2.98E-2	4.15E-4	1.91E-3	3.21E-2	3.76E-4	5.76E-3	2.11E-4	-1.37E-2	2.48E-2
MAETP	kg 1,4-DB-eq	6.61E+1	1.49E+0	7.53E+0	7.51E+1	1.34E+0	2.01E+1	2.58E-1	-2.88E+1	6.80E+1
TETP	kg 1,4-DB-eq	7.00E-3	5.03E-5	4.16E-3	1.12E-2	4.55E-5	1.34E-3	2.30E-6	-4.57E-3	8.03E-3
Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	2.47E+0	3.41E-2	1.38E-1	2.64E+0	3.03E-2	9.23E-1	9.61E-3	-1.21E+0	2.40E+0
GWP-f	kg CO2 eq	2.44E+0	3.41E-2	1.06E-1	2.58E+0	3.03E-2	8.48E-1	9.61E-3	-1.37E+0	2.10E+0
GWP-b	kg CO2 eq	2.48E-2	1.57E-5	2.19E-2	4.66E-2	1.84E-5	7.54E-2	1.21E-5	1.66E-1	2.88E-1
GWP-luluc	kg CO2 eq	3.02E-3	1.25E-5	1.01E-2	1.31E-2	1.07E-5	3.84E-4	2.52E-7	-2.05E-3	1.14E-2
ODP	kg CFC11 eq	1.31E-6	7.52E-9	1.12E-8	1.33E-6	6.98E-9	1.07E-7	3.58E-10	-6.63E-7	7.79E-7
AP	mol H+ eq	1.17E-2	1.98E-4	6.46E-4	1.25E-2	1.72E-4	1.82E-3	8.72E-6	-5.71E-3	8.84E-3
EP-fw	kg P eq	1.19E-4	3.44E-7	1.86E-6	1.22E-4	2.49E-7	1.29E-5	1.14E-8	-6.28E-5	7.20E-5
EP-m	kg N eq	2.14E-3	6.96E-5	1.53E-4	2.37E-3	6.17E-5	4.49E-4	5.41E-6	-1.03E-3	1.85E-3
EP-T	mol N eq	2.30E-2	7.68E-4	1.68E-3	2.54E-2	6.80E-4	4.95E-3	3.48E-5	-1.12E-2	1.99E-2
POCP	kg NMVOC eq	7.25E-3	2.19E-4	4.79E-4	7.95E-3	1.94E-4	1.48E-3	1.20E-5	-3.65E-3	5.98E-3
ADP-mm	kg Sb eq	2.38E-3	8.63E-7	3.69E-6	2.39E-3	7.83E-7	7.23E-6	8.74E-9	-2.76E-5	2.37E-3
ADP-f	MJ	6.02E+1	5.14E-1	1.18E+0	6.19E+1	4.65E-1	4.90E+0	2.62E-2	-3.28E+1	3.45E+1
WDP	m3 depriv.	3.97E+0	1.84E-3	9.17E-1	4.88E+0	1.43E-3	1.93E-1	1.70E-4	-2.12E+0	2.96E+0
PM	disease inc.	8.14E-8	3.06E-9	7.98E-9	9.24E-8	2.73E-9	2.26E-8	1.80E-10	-4.74E-8	7.06E-8
IR	kBq U-235 eq	1.39E-1	2.15E-3	1.88E-3	1.43E-1	2.03E-3	1.74E-2	1.20E-4	-7.09E-2	9.14E-2
ETP-fw	CTUe	8.03E+1	4.58E-1	2.75E+0	8.35E+1	3.77E-1	3.80E+1	4.18E-1	-3.11E+1	9.12E+1
HTP-c	CTUh	2.01E-9	1.49E-11	9.52E-11	2.12E-9	1.34E-11	5.47E-10	7.24E-13	-7.85E-10	1.90E-9
HTP-nc	CTUh	6.64E-8	5.01E-10	2.97E-9	6.99E-8	4.50E-10	1.32E-8	8.01E-11	-2.71E-8	5.65E-8
SQP	Pt	1.47E+1	4.46E-1	8.86E-2	1.53E+1	3.98E-1	2.99E+0	6.71E-2	-3.46E+1	-1.59E+1

Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	4.42E+0	6.43E-3	5.76E+0	1.02E+1	6.67E-3	3.53E-1	9.78E-4	-7.03E+0	3.52E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	4.42E+0	6.43E-3	5.76E+0	1.02E+1	6.67E-3	3.53E-1	9.78E-4	-7.03E+0	3.52E+0
PENRE	MJ	6.46E+1	5.46E-1	1.28E+0	6.64E+1	4.93E-1	5.22E+0	2.78E-2	-3.53E+1	3.69E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	6.46E+1	5.46E-1	1.28E+0	6.64E+1	4.93E-1	5.22E+0	2.78E-2	-3.53E+1	3.69E+1
PET	MJ	6.90E+1	5.52E-1	7.04E+0	7.66E+1	5.00E-1	5.57E+0	2.88E-2	-4.23E+1	4.04E+1
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	4.49E-2	6.26E-5	2.17E-2	6.67E-2	5.26E-5	5.29E-3	3.21E-5	-2.60E-2	4.61E-2
Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	3.44E-4	1.30E-6	1.26E-6	3.46E-4	1.19E-6	8.07E-6	3.19E-8	-2.80E-5	3.28E-4
NHWD	kg	2.59E-1	3.26E-2	1.94E-3	2.94E-1	2.88E-2	1.77E-1	1.15E-1	-1.13E-1	5.01E-1
RWD	kg	1.21E-4	3.37E-6	2.33E-6	1.27E-4	3.16E-6	1.87E-5	1.70E-7	-6.32E-5	8.55E-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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