Environmental Profile

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

Ecochain v3.5.80

Product:	3003190 - Wadal PVC Tee 88° GY 125x110 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	0.12	0	0.01	0.13	0	0.04	0	-0.06	0.11
ADPE	kg Sb-eq	1.08E-3	3.79E-7	1.67E-6	1.08E-3	3.54E-7	3.22E-6	3.95E-9	-1.23E-5	1.07E-3
ADPF	kg Sb-eq	1.26E-2	1.09E-4	2.87E-4	1.30E-2	9.97E-5	1.11E-3	5.48E-6	-6.93E-3	7.31E-3
GWP	kg CO2-eq	1.06E+0	1.48E-2	5.45E-2	1.13E+0	1.36E-2	3.78E-1	3.73E-3	-5.95E-1	9.29E-1
ODP	kg CFC-11-eq	5.97E-7	2.63E-9	4.31E-9	6.04E-7	2.52E-9	4.66E-8	1.31E-10	-3.01E-7	3.52E-7
POCP	kg ethene-eq	6.06E-4	8.94E-6	2.37E-5	6.38E-4	8.15E-6	8.79E-5	9.67E-7	-3.10E-4	4.26E-4
AP	kg SO2-eq	4.25E-3	6.51E-5	2.34E-4	4.55E-3	5.84E-5	6.48E-4	2.95E-6	-2.04E-3	3.22E-3
EP	kg PO4 3−-eq	5.47E-4	1.28E-5	3.01E-5	5.90E-4	1.17E-5	9.83E-5	1.16E-6	-2.77E-4	4.25E-4
HTP	kg 1,4-DB-eq	4.14E-1	6.24E-3	2.53E-2	4.46E-1	5.81E-3	1.69E-1	3.10E-4	-1.94E-1	4.26E-1
FAETP	kg 1,4-DB-eq	1.26E-2	1.82E-4	8.65E-4	1.36E-2	1.70E-4	2.57E-3	9.53E-5	-5.49E-3	1.10E-2
MAETP	kg 1,4-DB-eq	2.93E+1	6.55E-1	3.41E+0	3.33E+1	6.08E-1	8.86E+0	1.17E-1	-1.26E+1	3.03E+1
TETP	kg 1,4-DB-eq	3.07E-3	2.20E-5	1.88E-3	4.98E-3	2.06E-5	6.01E-4	1.04E-6	-1.84E-3	3.76E-3
Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	1.10E+0	1.50E-2	6.24E-2	1.17E+0	1.37E-2	4.05E-1	4.35E-3	-5.58E-1	1.04E+0
GWP-f	kg CO2 eq	1.08E+0	1.49E-2	4.79E-2	1.15E+0	1.37E-2	3.81E-1	4.34E-3	-6.08E-1	9.37E-1
GWP-b	kg CO2 eq	1.08E-2	6.90E-6	9.89E-3	2.07E-2	8.31E-6	2.37E-2	5.49E-6	5.10E-2	9.54E-2
GWP-luluc	kg CO2 eq	1.23E-3	5.47E-6	4.55E-3	5.79E-3	4.84E-6	1.73E-4	1.14E-7	-7.62E-4	5.20E-3
ODP	kg CFC11 eq	5.89E-7	3.30E-9	5.06E-9	5.97E-7	3.15E-9	4.80E-8	1.62E-10	-2.98E-7	3.51E-7
AP	mol H+ eq	5.17E-3	8.67E-5	2.92E-4	5.55E-3	7.80E-5	8.14E-4	3.94E-6	-2.47E-3	3.98E-3
EP-fw	kg P eq	5.25E-5	1.51E-7	8.39E-7	5.35E-5	1.13E-7	5.80E-6	5.16E-9	-2.63E-5	3.31E-5
EP-m	kg N eq	9.28E-4	3.05E-5	6.90E-5	1.03E-3	2.79E-5	1.99E-4	2.45E-6	-4.41E-4	8.16E-4
EP-T	mol N eq	1.00E-2	3.37E-4	7.61E-4	1.11E-2	3.07E-4	2.19E-3	1.57E-5	-4.74E-3	8.86E-3
POCP	kg NMVOC eq	3.19E-3	9.61E-5	2.17E-4	3.51E-3	8.79E-5	6.55E-4	5.41E-6	-1.58E-3	2.68E-3
ADP-mm	kg Sb eq	1.08E-3	3.79E-7	1.67E-6	1.08E-3	3.54E-7	3.22E-6	3.95E-9	-1.23E-5	1.07E-3
ADP-f	MJ	2.69E+1	2.25E-1	5.36E-1	2.77E+1	2.10E-1	2.20E+0	1.18E-2	-1.46E+1	1.55E+1
WDP	m3 depriv.	1.78E+0	8.06E-4	4.15E-1	2.20E+0	6.45E-4	8.71E-2	7.67E-5	-9.23E-1	1.37E+0
PM	disease inc.	3.50E-8	1.34E-9	3.61E-9	3.99E-8	1.24E-9	1.01E-8	8.15E-11	-1.92E-8	3.21E-8
IR	kBq U-235 eq	6.17E-2	9.44E-4	8.52E-4	6.35E-2	9.18E-4	7.78E-3	5.44E-5	-3.06E-2	4.17E-2
ETP-fw	CTUe	3.34E+1	2.01E-1	1.24E+0	3.48E+1	1.71E-1	1.71E+1	1.89E-1	-1.23E+1	4.00E+1
HTP-c	CTUh	8.98E-10	6.52E-12	4.31E-11	9.48E-10	6.07E-12	2.44E-10	3.27E-13	-3.41E-10	8.57E-10
HTP-nc	CTUh	2.97E-8	2.20E-10	1.34E-9	3.13E-8	2.03E-10	5.92E-9	3.62E-11	-1.18E-8	2.56E-8
SQP	Pt	5.71E+0	1.95E-1	4.00E-2	5.95E+0	1.80E-1	1.34E+0	3.03E-2	-1.14E+1	-3.87E+0

Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.80E+0	2.82E-3	2.60E+0	4.41E+0	3.01E-3	1.59E-1	4.42E-4	-2.40E+0	2.17E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.80E+0	2.82E-3	2.60E+0	4.41E+0	3.01E-3	1.59E-1	4.42E-4	-2.40E+0	2.17E+0
PENRE	MJ	2.89E+1	2.39E-1	5.79E-1	2.97E+1	2.23E-1	2.34E+0	1.26E-2	-1.57E+1	1.65E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.89E+1	2.39E-1	5.79E-1	2.97E+1	2.23E-1	2.34E+0	1.26E-2	-1.57E+1	1.65E+1
PET	MJ	3.07E+1	2.42E-1	3.18E+0	3.41E+1	2.26E-1	2.50E+0	1.30E-2	-1.81E+1	1.87E+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	2.00E-2	2.74E-5	9.80E-3	2.98E-2	2.38E-5	2.39E-3	1.45E-5	-1.09E-2	2.14E-2
Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.55E-4	5.71E-7	5.69E-7	1.56E-4	5.37E-7	3.59E-6	1.44E-8	-1.24E-5	1.48E-4
NHWD	kg	1.13E-1	1.43E-2	8.78E-4	1.28E-1	1.30E-2	7.91E-2	5.21E-2	-4.92E-2	2.23E-1
RWD	kg	5.36E-5	1.48E-6	1.05E-6	5.61E-5	1.43E-6	8.34E-6	7.70E-8	-2.72E-5	3.88E-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