Environmental Profile

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

Ecochain v3.5.80

Product:	3003153 - Wadal PVC Tee 45° GY 75 S/S/SP
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

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Results

Environmental impact SBK set 1	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
ECI	euro	0.07	0	0	0.07	0	0.02	0	-0.04	0.06
ADPE	kg Sb-eq	6.26E-4	2.18E-7	9.80E-7	6.27E-4	2.06E-7	1.86E-6	2.30E-9	-7.14E-6	6.22E-4
ADPF	kg Sb-eq	7.31E-3	6.27E-5	1.68E-4	7.54E-3	5.79E-5	6.43E-4	3.18E-6	-4.01E-3	4.24E-3
GWP	kg CO2-eq	6.12E-1	8.53E-3	3.20E-2	6.52E-1	7.89E-3	2.20E-1	2.16E-3	-3.44E-1	5.38E-1
ODP	kg CFC-11-eq	3.46E-7	1.51E-9	2.53E-9	3.50E-7	1.46E-9	2.70E-8	7.58E-11	-1.75E-7	2.04E-7
POCP	kg ethene-eq	3.50E-4	5.15E-6	1.39E-5	3.69E-4	4.73E-6	5.07E-5	5.62E-7	-1.78E-4	2.47E-4
AP	kg SO2-eq	2.45E-3	3.75E-5	1.37E-4	2.63E-3	3.39E-5	3.75E-4	1.71E-6	-1.17E-3	1.87E-3
EP	kg PO4 3−-eq	3.14E-4	7.37E-6	1.77E-5	3.39E-4	6.78E-6	5.68E-5	6.75E-7	-1.57E-4	2.47E-4
HTP	kg 1,4-DB-eq	2.39E-1	3.59E-3	1.48E-2	2.58E-1	3.37E-3	9.78E-2	1.80E-4	-1.12E-1	2.47E-1
FAETP	kg 1,4-DB-eq	7.17E-3	1.05E-4	5.07E-4	7.78E-3	9.88E-5	1.48E-3	5.54E-5	-3.08E-3	6.34E-3
MAETP	kg 1,4-DB-eq	1.69E+1	3.77E-1	2.00E+0	1.93E+1	3.53E-1	5.11E+0	6.77E-2	-7.24E+0	1.76E+1
TETP	kg 1,4-DB-eq	1.77E-3	1.27E-5	1.10E-3	2.89E-3	1.20E-5	3.49E-4	6.05E-7	-1.03E-3	2.22E-3
Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	6.33E-1	8.61E-3	3.66E-2	6.78E-1	7.96E-3	2.33E-1	2.52E-3	-3.26E-1	5.96E-1
GWP-f	kg CO2 eq	6.26E-1	8.60E-3	2.81E-2	6.63E-1	7.95E-3	2.21E-1	2.52E-3	-3.51E-1	5.43E-1
GWP-b	kg CO2 eq	6.24E-3	3.97E-6	5.80E-3	1.20E-2	4.83E-6	1.21E-2	3.19E-6	2.57E-2	4.98E-2
GWP-luluc	kg CO2 eq	6.94E-4	3.15E-6	2.67E-3	3.36E-3	2.81E-6	1.00E-4	6.62E-8	-4.15E-4	3.05E-3
ODP	kg CFC11 eq	3.42E-7	1.90E-9	2.97E-9	3.47E-7	1.83E-9	2.78E-8	9.41E-11	-1.73E-7	2.03E-7
AP	mol H+ eq	2.99E-3	4.99E-5	1.71E-4	3.21E-3	4.53E-5	4.71E-4	2.29E-6	-1.42E-3	2.31E-3
EP-fw	kg P eq	3.03E-5	8.68E-8	4.92E-7	3.09E-5	6.54E-8	3.36E-6	3.00E-9	-1.50E-5	1.93E-5
EP-m	kg N eq	5.33E-4	1.76E-5	4.05E-5	5.91E-4	1.62E-5	1.15E-4	1.42E-6	-2.52E-4	4.71E-4
EP-T	mol N eq	5.75E-3	1.94E-4	4.46E-4	6.39E-3	1.79E-4	1.27E-3	9.13E-6	-2.71E-3	5.13E-3
POCP	kg NMVOC eq	1.84E-3	5.53E-5	1.27E-4	2.02E-3	5.10E-5	3.78E-4	3.14E-6	-9.05E-4	1.55E-3
ADP-mm	kg Sb eq	6.26E-4	2.18E-7	9.80E-7	6.27E-4	2.06E-7	1.86E-6	2.30E-9	-7.14E-6	6.22E-4
ADP-f	MJ	1.56E+1	1.30E-1	3.14E-1	1.60E+1	1.22E-1	1.27E+0	6.88E-3	-8.45E+0	8.98E+0
WDP	m3 depriv.	1.04E+0	4.64E-4	2.43E-1	1.28E+0	3.74E-4	5.06E-2	4.46E-5	-5.30E-1	8.00E-1
PM	disease inc.	2.00E-8	7.73E-10	2.12E-9	2.29E-8	7.18E-10	5.81E-9	4.73E-11	-1.08E-8	1.87E-8
IR	kBq U-235 eq	3.57E-2	5.44E-4	4.99E-4	3.67E-2	5.33E-4	4.50E-3	3.16E-5	-1.75E-2	2.43E-2
ETP-fw	CTUe	1.89E+1	1.16E-1	7.30E-1	1.97E+1	9.91E-2	9.94E+0	1.10E-1	-6.83E+0	2.31E+1
HTP-c	CTUh	5.20E-10	3.75E-12	2.53E-11	5.49E-10	3.53E-12	1.41E-10	1.90E-13	-1.96E-10	4.98E-10
HTP-nc	CTUh	1.72E-8	1.27E-10	7.89E-10	1.81E-8	1.18E-10	3.43E-9	2.10E-11	-6.77E-9	1.49E-8
SQP	Pt	3.16E+0	1.13E-1	2.35E-2	3.30E+0	1.04E-1	7.75E-1	1.76E-2	-5.91E+0	-1.71E+0

Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.01E+0	1.62E-3	1.53E+0	2.54E+0	1.75E-3	9.22E-2	2.57E-4	-1.27E+0	1.37E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.01E+0	1.62E-3	1.53E+0	2.54E+0	1.75E-3	9.22E-2	2.57E-4	-1.27E+0	1.37E+0
PENRE	MJ	1.67E+1	1.38E-1	3.40E-1	1.72E+1	1.30E-1	1.35E+0	7.30E-3	-9.10E+0	9.58E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.67E+1	1.38E-1	3.40E-1	1.72E+1	1.30E-1	1.35E+0	7.30E-3	-9.10E+0	9.58E+0
PET	MJ	1.77E+1	1.39E-1	1.87E+0	1.97E+1	1.31E-1	1.45E+0	7.55E-3	-1.04E+1	1.10E+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	1.16E-2	1.58E-5	5.75E-3	1.73E-2	1.38E-5	1.38E-3	8.43E-6	-6.16E-3	1.26E-2
Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	8.99E-5	3.29E-7	3.34E-7	9.06E-5	3.12E-7	2.08E-6	8.37E-9	-7.14E-6	8.59E-5
NHWD	kg	6.50E-2	8.23E-3	5.15E-4	7.38E-2	7.56E-3	4.58E-2	3.02E-2	-2.83E-2	1.29E-1
RWD	kg	3.10E-5	8.52E-7	6.18E-7	3.24E-5	8.30E-7	4.82E-6	4.47E-8	-1.56E-5	2.26E-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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