

Environmental Profile

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

Ecochain v3.5.80



Product: 3003120 - Wadal PVC Bend 45° GY 125 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					Use stage							End-of-Life stage				
A1 Raw material supply A2 Transport A3 Manufacturing					B1 Use B2 Maintenance B3 Repair B4 Replacement B5 Refurbishment B6 Operational energy use B7 Operational water use							C1 De-construction demolition C2 Transport C3 Waste processing C4 Disposal				
Construction process stage					Benefits and loads beyond the system boundaries											
A4 Transport gate to site A5 Assembly / Construction installation process					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	0.09	0	0.01	0.09	0	0.03	0	-0.04	0.08
ADPE	kg Sb-eq	8.00E-4	2.78E-7	1.24E-6	8.02E-4	2.63E-7	2.38E-6	2.94E-9	-9.12E-6	7.95E-4
ADPF	kg Sb-eq	9.33E-3	8.00E-5	2.13E-4	9.63E-3	7.40E-5	8.22E-4	4.07E-6	-5.12E-3	5.41E-3
GWP	kg CO2-eq	7.81E-1	1.09E-2	4.04E-2	8.32E-1	1.01E-2	2.80E-1	2.77E-3	-4.39E-1	6.87E-1
ODP	kg CFC-11-eq	4.43E-7	1.93E-9	3.20E-9	4.48E-7	1.87E-9	3.45E-8	9.69E-11	-2.23E-7	2.61E-7
POCP	kg ethene-eq	4.47E-4	6.57E-6	1.76E-5	4.71E-4	6.05E-6	6.48E-5	7.18E-7	-2.27E-4	3.16E-4
AP	kg SO2-eq	3.13E-3	4.79E-5	1.74E-4	3.35E-3	4.34E-5	4.79E-4	2.19E-6	-1.49E-3	2.39E-3
EP	kg PO4 3--eq	4.00E-4	9.40E-6	2.24E-5	4.32E-4	8.66E-6	7.25E-5	8.63E-7	-1.99E-4	3.15E-4
HTP	kg 1,4-DB-eq	3.06E-1	4.58E-3	1.88E-2	3.29E-1	4.31E-3	1.25E-1	2.30E-4	-1.43E-1	3.16E-1
FAETP	kg 1,4-DB-eq	9.13E-3	1.34E-4	6.42E-4	9.91E-3	1.26E-4	1.90E-3	7.08E-5	-3.91E-3	8.09E-3
MAETP	kg 1,4-DB-eq	2.16E+1	4.81E-1	2.53E+0	2.46E+1	4.51E-1	6.52E+0	8.66E-2	-9.23E+0	2.24E+1
TETP	kg 1,4-DB-eq	2.26E-3	1.62E-5	1.40E-3	3.67E-3	1.53E-5	4.45E-4	7.73E-7	-1.31E-3	2.83E-3
Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	8.08E-1	1.10E-2	4.63E-2	8.65E-1	1.02E-2	2.98E-1	3.23E-3	-4.17E-1	7.59E-1
GWP-f	kg CO2 eq	7.99E-1	1.10E-2	3.56E-2	8.45E-1	1.02E-2	2.82E-1	3.22E-3	-4.48E-1	6.93E-1
GWP-b	kg CO2 eq	7.97E-3	5.07E-6	7.34E-3	1.53E-2	6.17E-6	1.50E-2	4.08E-6	3.19E-2	6.22E-2
GWP-luluc	kg CO2 eq	8.81E-4	4.02E-6	3.38E-3	4.26E-3	3.60E-6	1.28E-4	8.47E-8	-5.24E-4	3.87E-3
ODP	kg CFC11 eq	4.37E-7	2.42E-9	3.76E-9	4.43E-7	2.34E-9	3.56E-8	1.20E-10	-2.21E-7	2.60E-7
AP	mol H+ eq	3.81E-3	6.37E-5	2.17E-4	4.09E-3	5.79E-5	6.01E-4	2.93E-6	-1.80E-3	2.95E-3
EP-fw	kg P eq	3.86E-5	1.11E-7	6.23E-7	3.94E-5	8.36E-8	4.30E-6	3.83E-9	-1.90E-5	2.47E-5
EP-m	kg N eq	6.79E-4	2.24E-5	5.12E-5	7.53E-4	2.07E-5	1.47E-4	1.82E-6	-3.21E-4	6.01E-4
EP-T	mol N eq	7.33E-3	2.47E-4	5.65E-4	8.14E-3	2.28E-4	1.61E-3	1.17E-5	-3.45E-3	6.54E-3
POCP	kg NMVOC eq	2.35E-3	7.06E-5	1.61E-4	2.58E-3	6.52E-5	4.83E-4	4.02E-6	-1.15E-3	1.98E-3
ADP-mm	kg Sb eq	8.00E-4	2.78E-7	1.24E-6	8.02E-4	2.63E-7	2.38E-6	2.94E-9	-9.12E-6	7.95E-4
ADP-f	MJ	1.99E+1	1.66E-1	3.98E-1	2.05E+1	1.56E-1	1.62E+0	8.79E-3	-1.08E+1	1.15E+1
WDP	m3 depriv.	1.32E+0	5.92E-4	3.08E-1	1.63E+0	4.79E-4	6.46E-2	5.70E-5	-6.77E-1	1.02E+0
PM	disease inc.	2.55E-8	9.86E-10	2.68E-9	2.92E-8	9.17E-10	7.42E-9	6.05E-11	-1.37E-8	2.39E-8
IR	kBq U-235 eq	4.55E-2	6.94E-4	6.32E-4	4.69E-2	6.82E-4	5.75E-3	4.04E-5	-2.23E-2	3.10E-2
ETP-fw	CTUe	2.40E+1	1.48E-1	9.24E-1	2.51E+1	1.27E-1	1.27E+1	1.40E-1	-8.66E+0	2.94E+1
HTP-c	CTUh	6.64E-10	4.79E-12	3.20E-11	7.01E-10	4.51E-12	1.80E-10	2.43E-13	-2.50E-10	6.36E-10
HTP-nc	CTUh	2.20E-8	1.61E-10	9.98E-10	2.31E-8	1.51E-10	4.38E-9	2.69E-11	-8.64E-9	1.90E-8
SQP	Pt	4.00E+0	1.44E-1	2.97E-2	4.18E+0	1.33E-1	9.91E-1	2.25E-2	-7.38E+0	-2.06E+0

Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.29E+0	2.07E-3	1.93E+0	3.22E+0	2.24E-3	1.18E-1	3.28E-4	-1.59E+0	1.75E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.29E+0	2.07E-3	1.93E+0	3.22E+0	2.24E-3	1.18E-1	3.28E-4	-1.59E+0	1.75E+0
PENRE	MJ	2.13E+1	1.76E-1	4.30E-1	2.19E+1	1.66E-1	1.73E+0	9.33E-3	-1.16E+1	1.22E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.13E+1	1.76E-1	4.30E-1	2.19E+1	1.66E-1	1.73E+0	9.33E-3	-1.16E+1	1.22E+1
PET	MJ	2.26E+1	1.78E-1	2.36E+0	2.52E+1	1.68E-1	1.85E+0	9.66E-3	-1.32E+1	1.40E+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	1.48E-2	2.02E-5	7.27E-3	2.21E-2	1.76E-5	1.77E-3	1.08E-5	-7.84E-3	1.60E-2
Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.15E-4	4.20E-7	4.22E-7	1.16E-4	3.99E-7	2.65E-6	1.07E-8	-9.12E-6	1.10E-4
NHWD	kg	8.29E-2	1.05E-2	6.52E-4	9.40E-2	9.67E-3	5.85E-2	3.86E-2	-3.61E-2	1.65E-1
RWD	kg	3.95E-5	1.09E-6	7.83E-7	4.14E-5	1.06E-6	6.15E-6	5.72E-8	-1.98E-5	2.88E-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



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