

Environmental Profile

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

Ecochain v3.5.80



Product: 3003138 - Wadal PVC Bend 15° GY 125 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					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]

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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	6.28E-4	2.22E-7	9.74E-7	6.29E-4	2.06E-7	1.88E-6	2.30E-9	-7.21E-6	6.24E-4
ADPF	kg Sb-eq	7.38E-3	6.39E-5	1.67E-4	7.61E-3	5.81E-5	6.48E-4	3.19E-6	-4.05E-3	4.27E-3
GWP	kg CO2-eq	6.20E-1	8.69E-3	3.17E-2	6.60E-1	7.91E-3	2.21E-1	2.17E-3	-3.48E-1	5.43E-1
ODP	kg CFC-11-eq	3.48E-7	1.54E-9	2.51E-9	3.52E-7	1.47E-9	2.72E-8	7.61E-11	-1.76E-7	2.05E-7
POCP	kg ethene-eq	3.54E-4	5.24E-6	1.38E-5	3.73E-4	4.75E-6	5.14E-5	5.63E-7	-1.82E-4	2.48E-4
AP	kg SO2-eq	2.48E-3	3.82E-5	1.36E-4	2.66E-3	3.40E-5	3.79E-4	1.72E-6	-1.20E-3	1.88E-3
EP	kg PO4 3--eq	3.22E-4	7.51E-6	1.75E-5	3.47E-4	6.80E-6	5.75E-5	6.77E-7	-1.64E-4	2.48E-4
HTP	kg 1,4-DB-eq	2.42E-1	3.66E-3	1.48E-2	2.61E-1	3.38E-3	9.86E-2	1.80E-4	-1.14E-1	2.49E-1
FAETP	kg 1,4-DB-eq	7.44E-3	1.07E-4	5.04E-4	8.05E-3	9.91E-5	1.50E-3	5.56E-5	-3.28E-3	6.43E-3
MAETP	kg 1,4-DB-eq	1.71E+1	3.84E-1	1.98E+0	1.95E+1	3.54E-1	5.19E+0	6.79E-2	-7.38E+0	1.77E+1
TETP	kg 1,4-DB-eq	1.80E-3	1.29E-5	1.10E-3	2.91E-3	1.20E-5	3.51E-4	6.07E-7	-1.10E-3	2.18E-3
Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	6.41E-1	8.77E-3	3.63E-2	6.86E-1	7.98E-3	2.38E-1	2.53E-3	-3.24E-1	6.10E-1
GWP-f	kg CO2 eq	6.34E-1	8.76E-3	2.79E-2	6.71E-1	7.98E-3	2.22E-1	2.53E-3	-3.56E-1	5.47E-1
GWP-b	kg CO2 eq	6.36E-3	4.04E-6	5.76E-3	1.21E-2	4.84E-6	1.50E-2	3.20E-6	3.25E-2	5.97E-2
GWP-luluc	kg CO2 eq	7.33E-4	3.21E-6	2.65E-3	3.39E-3	2.82E-6	1.01E-4	6.65E-8	-4.64E-4	3.03E-3
ODP	kg CFC11 eq	3.44E-7	1.93E-9	2.95E-9	3.48E-7	1.84E-9	2.80E-8	9.44E-11	-1.74E-7	2.04E-7
AP	mol H+ eq	3.03E-3	5.08E-5	1.70E-4	3.25E-3	4.54E-5	4.75E-4	2.30E-6	-1.45E-3	2.32E-3
EP-fw	kg P eq	3.08E-5	8.84E-8	4.89E-7	3.14E-5	6.56E-8	3.38E-6	3.01E-9	-1.56E-5	1.92E-5
EP-m	kg N eq	5.46E-4	1.79E-5	4.02E-5	6.04E-4	1.63E-5	1.16E-4	1.42E-6	-2.60E-4	4.78E-4
EP-T	mol N eq	5.87E-3	1.97E-4	4.43E-4	6.51E-3	1.79E-4	1.28E-3	9.16E-6	-2.80E-3	5.18E-3
POCP	kg NMVOC eq	1.87E-3	5.64E-5	1.26E-4	2.05E-3	5.12E-5	3.84E-4	3.15E-6	-9.28E-4	1.56E-3
ADP-mm	kg Sb eq	6.28E-4	2.22E-7	9.74E-7	6.29E-4	2.06E-7	1.88E-6	2.30E-9	-7.21E-6	6.24E-4
ADP-f	MJ	1.57E+1	1.32E-1	3.12E-1	1.62E+1	1.22E-1	1.28E+0	6.90E-3	-8.54E+0	9.04E+0
WDP	m3 depriv.	1.04E+0	4.73E-4	2.42E-1	1.28E+0	3.76E-4	5.08E-2	4.47E-5	-5.42E-1	7.92E-1
PM	disease inc.	2.06E-8	7.87E-10	2.10E-9	2.35E-8	7.20E-10	5.88E-9	4.75E-11	-1.14E-8	1.87E-8
IR	kBq U-235 eq	3.61E-2	5.54E-4	4.96E-4	3.71E-2	5.35E-4	4.55E-3	3.17E-5	-1.80E-2	2.42E-2
ETP-fw	CTUe	1.98E+1	1.18E-1	7.25E-1	2.06E+1	9.94E-2	9.98E+0	1.10E-1	-7.36E+0	2.35E+1
HTP-c	CTUh	5.25E-10	3.82E-12	2.51E-11	5.54E-10	3.54E-12	1.43E-10	1.91E-13	-2.00E-10	5.00E-10
HTP-nc	CTUh	1.73E-8	1.29E-10	7.84E-10	1.83E-8	1.19E-10	3.45E-9	2.11E-11	-6.93E-9	1.49E-8
SQP	Pt	3.44E+0	1.15E-1	2.33E-2	3.58E+0	1.05E-1	7.81E-1	1.77E-2	-7.13E+0	-2.65E+0

Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.07E+0	1.65E-3	1.52E+0	2.59E+0	1.76E-3	9.27E-2	2.58E-4	-1.49E+0	1.19E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.07E+0	1.65E-3	1.52E+0	2.59E+0	1.76E-3	9.27E-2	2.58E-4	-1.49E+0	1.19E+0
PENRE	MJ	1.69E+1	1.40E-1	3.37E-1	1.73E+1	1.30E-1	1.36E+0	7.32E-3	-9.19E+0	9.65E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.69E+1	1.40E-1	3.37E-1	1.73E+1	1.30E-1	1.36E+0	7.32E-3	-9.19E+0	9.65E+0
PET	MJ	1.79E+1	1.42E-1	1.85E+0	1.99E+1	1.32E-1	1.46E+0	7.58E-3	-1.07E+1	1.08E+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	1.17E-2	1.61E-5	5.71E-3	1.74E-2	1.39E-5	1.39E-3	8.45E-6	-6.43E-3	1.24E-2
Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	9.04E-5	3.35E-7	3.31E-7	9.10E-5	3.13E-7	2.10E-6	8.40E-9	-7.25E-6	8.62E-5
NHWD	kg	6.63E-2	8.38E-3	5.12E-4	7.52E-2	7.59E-3	4.62E-2	3.03E-2	-2.89E-2	1.30E-1
RWD	kg	3.14E-5	8.68E-7	6.14E-7	3.28E-5	8.33E-7	4.87E-6	4.49E-8	-1.60E-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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