

Environmental Profile

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

Ecochain v3.5.80



Product: 3003143 - Wadal PVC Bend 88° GY 160 S/S
Unit: 1 piece
Manufacturer: Wavin - NL - Hardenberg - Verified
Address: J.C. Kellerlaan 3
7772 SG Hardenberg
Netherlands

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



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.

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	0.22	0	0.01	0.24	0	0.07	0	-0.12	0.2
ADPE	kg Sb-eq	2.02E-3	7.14E-7	3.16E-6	2.02E-3	6.62E-7	6.05E-6	7.39E-9	-2.32E-5	2.00E-3
ADPF	kg Sb-eq	2.37E-2	2.06E-4	5.42E-4	2.44E-2	1.86E-4	2.08E-3	1.02E-5	-1.30E-2	1.37E-2
GWP	kg CO2-eq	1.99E+0	2.79E-2	1.03E-1	2.12E+0	2.54E-2	7.09E-1	6.97E-3	-1.12E+0	1.74E+0
ODP	kg CFC-11-eq	1.12E-6	4.96E-9	8.13E-9	1.13E-6	4.71E-9	8.73E-8	2.44E-10	-5.64E-7	6.59E-7
POCP	kg ethene-eq	1.14E-3	1.69E-5	4.47E-5	1.20E-3	1.52E-5	1.65E-4	1.81E-6	-5.84E-4	7.98E-4
AP	kg SO2-eq	7.98E-3	1.23E-4	4.42E-4	8.55E-3	1.09E-4	1.22E-3	5.51E-6	-3.86E-3	6.02E-3
EP	kg PO4 3--eq	1.04E-3	2.41E-5	5.69E-5	1.12E-3	2.18E-5	1.85E-4	2.17E-6	-5.31E-4	7.95E-4
HTP	kg 1,4-DB-eq	7.78E-1	1.18E-2	4.78E-2	8.38E-1	1.09E-2	3.16E-1	5.79E-4	-3.67E-1	7.99E-1
FAETP	kg 1,4-DB-eq	2.40E-2	3.44E-4	1.63E-3	2.60E-2	3.18E-4	4.82E-3	1.78E-4	-1.06E-2	2.07E-2
MAETP	kg 1,4-DB-eq	5.50E+1	1.24E+0	6.43E+0	6.27E+1	1.14E+0	1.67E+1	2.18E-1	-2.38E+1	5.70E+1
TETP	kg 1,4-DB-eq	5.80E-3	4.16E-5	3.55E-3	9.39E-3	3.85E-5	1.12E-3	1.95E-6	-3.56E-3	7.00E-3
Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	2.06E+0	2.82E-2	1.18E-1	2.21E+0	2.56E-2	7.64E-1	8.12E-3	-1.04E+0	1.97E+0
GWP-f	kg CO2 eq	2.04E+0	2.82E-2	9.05E-2	2.16E+0	2.56E-2	7.14E-1	8.12E-3	-1.14E+0	1.76E+0
GWP-b	kg CO2 eq	2.05E-2	1.30E-5	1.87E-2	3.91E-2	1.55E-5	4.99E-2	1.03E-5	1.08E-1	1.97E-1
GWP-luluc	kg CO2 eq	2.37E-3	1.03E-5	8.59E-3	1.10E-2	9.06E-6	3.24E-4	2.13E-7	-1.51E-3	9.79E-3
ODP	kg CFC11 eq	1.10E-6	6.22E-9	9.56E-9	1.12E-6	5.90E-9	8.99E-8	3.03E-10	-5.58E-7	6.56E-7
AP	mol H+ eq	9.73E-3	1.63E-4	5.52E-4	1.04E-2	1.46E-4	1.53E-3	7.37E-6	-4.67E-3	7.45E-3
EP-fw	kg P eq	9.90E-5	2.84E-7	1.58E-6	1.01E-4	2.11E-7	1.09E-5	9.65E-9	-5.04E-5	6.16E-5
EP-m	kg N eq	1.76E-3	5.76E-5	1.30E-4	1.95E-3	5.21E-5	3.74E-4	4.57E-6	-8.39E-4	1.54E-3
EP-T	mol N eq	1.89E-2	6.35E-4	1.44E-3	2.10E-2	5.75E-4	4.12E-3	2.94E-5	-9.03E-3	1.67E-2
POCP	kg NMVOC eq	6.02E-3	1.81E-4	4.09E-4	6.61E-3	1.64E-4	1.23E-3	1.01E-5	-2.99E-3	5.03E-3
ADP-mm	kg Sb eq	2.02E-3	7.14E-7	3.16E-6	2.02E-3	6.62E-7	6.05E-6	7.39E-9	-2.31E-5	2.00E-3
ADP-f	MJ	5.05E+1	4.25E-1	1.01E+0	5.19E+1	3.93E-1	4.12E+0	2.21E-2	-2.74E+1	2.90E+1
WDP	m3 depriv.	3.34E+0	1.52E-3	7.83E-1	4.12E+0	1.21E-3	1.63E-1	1.43E-4	-1.74E+0	2.55E+0
PM	disease inc.	6.64E-8	2.53E-9	6.81E-9	7.57E-8	2.31E-9	1.89E-8	1.52E-10	-3.71E-8	6.00E-8
IR	kBq U-235 eq	1.16E-1	1.78E-3	1.61E-3	1.19E-1	1.72E-3	1.46E-2	1.02E-4	-5.80E-2	7.77E-2
ETP-fw	CTUe	6.40E+1	3.79E-1	2.35E+0	6.67E+1	3.19E-1	3.20E+1	3.53E-1	-2.39E+1	7.55E+1
HTP-c	CTUh	1.69E-9	1.23E-11	8.13E-11	1.78E-9	1.13E-11	4.58E-10	6.12E-13	-6.45E-10	1.60E-9
HTP-nc	CTUh	5.57E-8	4.15E-10	2.54E-9	5.86E-8	3.80E-10	1.11E-8	6.77E-11	-2.23E-8	4.79E-8
SQP	Pt	1.12E+1	3.69E-1	7.56E-2	1.16E+1	3.36E-1	2.51E+0	5.67E-2	-2.36E+1	-9.03E+0

Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	3.47E+0	5.32E-3	4.92E+0	8.40E+0	5.63E-3	2.97E-1	8.26E-4	-4.91E+0	3.79E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	3.47E+0	5.32E-3	4.92E+0	8.40E+0	5.63E-3	2.97E-1	8.26E-4	-4.91E+0	3.79E+0
PENRE	MJ	5.42E+1	4.51E-1	1.09E+0	5.57E+1	4.17E-1	4.38E+0	2.35E-2	-2.95E+1	3.10E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	5.42E+1	4.51E-1	1.09E+0	5.57E+1	4.17E-1	4.38E+0	2.35E-2	-2.95E+1	3.10E+1
PET	MJ	5.76E+1	4.57E-1	6.01E+0	6.41E+1	4.23E-1	4.68E+0	2.43E-2	-3.44E+1	3.48E+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	3.76E-2	5.18E-5	1.85E-2	5.61E-2	4.44E-5	4.46E-3	2.71E-5	-2.08E-2	3.99E-2
Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.90E-4	1.08E-6	1.07E-6	2.92E-4	1.00E-6	6.75E-6	2.70E-8	-2.33E-5	2.77E-4
NHWD	kg	2.14E-1	2.70E-2	1.66E-3	2.42E-1	2.43E-2	1.48E-1	9.73E-2	-9.31E-2	4.19E-1
RWD	kg	1.01E-4	2.79E-6	1.99E-6	1.06E-4	2.67E-6	1.57E-5	1.44E-7	-5.16E-5	7.25E-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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