

Environmental Profile

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

Ecochain v3.5.80



Product: 3003108 - Wadal PVC Bend 45° GY 32 S/SP
Unit: 1 piece
Manufacturer: Wavin - PL -Buk - Extra products

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: EN15804+A2 (2019)
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 - PL -Buk - Extra products (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

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	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	9.42E-2	1.29E-3	1.45E-4	9.57E-2	1.29E-3	8.37E-2	4.14E-4	-6.61E-2	1.15E-1
GWP-f	kg CO2 eq	1.27E-1	1.28E-3	1.46E-4	1.28E-1	1.29E-3	4.90E-2	4.14E-4	-6.89E-2	1.10E-1
GWP-b	kg CO2 eq	-3.25E-2	7.80E-7	-1.54E-6	-3.25E-2	7.81E-7	3.47E-2	5.13E-7	2.86E-3	5.11E-3
GWP-luluc	kg CO2 eq	1.37E-4	4.55E-7	1.49E-7	1.38E-4	4.55E-7	1.61E-5	1.12E-8	-7.42E-5	8.00E-5
ODP	kg CFC11 eq	5.53E-8	2.96E-10	8.26E-12	5.56E-8	2.96E-10	4.44E-9	1.53E-11	-2.92E-8	3.12E-8
AP	mol H+ eq	6.10E-4	7.32E-6	1.47E-6	6.19E-4	7.32E-6	7.79E-5	3.73E-7	-2.60E-4	4.44E-4
EP-fw	kg P eq	5.64E-6	1.06E-8	8.24E-9	5.66E-6	1.06E-8	5.38E-7	4.99E-10	-2.54E-6	3.66E-6
EP-m	kg N eq	1.10E-4	2.62E-6	1.55E-7	1.12E-4	2.62E-6	1.96E-5	2.27E-7	-4.96E-5	8.53E-5
EP-T	mol N eq	1.20E-3	2.88E-5	1.85E-6	1.24E-3	2.89E-5	2.16E-4	1.48E-6	-5.41E-4	9.41E-4
POCP	kg NMVOC eq	4.09E-4	8.25E-6	6.28E-7	4.18E-4	8.26E-6	6.43E-5	5.12E-7	-1.86E-4	3.05E-4
ADP-mm	kg Sb eq	9.95E-5	3.32E-8	1.97E-8	9.95E-5	3.33E-8	3.02E-7	3.78E-10	-1.23E-6	9.86E-5
ADP-f	MJ	3.04E+0	1.97E-2	1.36E-3	3.06E+0	1.97E-2	2.08E-1	1.12E-3	-1.58E+0	1.71E+0
WDP	m3 depriv.	1.78E-1	6.05E-5	5.22E-5	1.78E-1	6.06E-5	8.02E-3	8.79E-6	-8.59E-2	1.00E-1
PM	disease inc.	4.71E-9	1.16E-10	9.08E-12	4.83E-9	1.16E-10	9.64E-10	7.68E-12	-2.26E-9	3.66E-9
IR	kBq U-235 eq	6.42E-3	8.62E-5	1.02E-6	6.51E-3	8.63E-5	7.35E-4	5.10E-6	-3.01E-3	4.33E-3
ETP-fw	CTUe	3.38E+0	1.60E-2	1.21E-2	3.41E+0	1.60E-2	1.56E+0	1.72E-2	-1.16E+0	3.85E+0
HTP-c	CTUh	1.13E-10	5.70E-13	6.17E-13	1.14E-10	5.70E-13	2.56E-11	3.19E-14	-4.35E-11	9.70E-11
HTP-nc	CTUh	3.17E-9	1.91E-11	1.57E-11	3.21E-9	1.91E-11	5.63E-10	3.31E-12	-1.13E-9	2.66E-9
SQP	Pt	3.33E+0	1.69E-2	2.24E-3	3.35E+0	1.69E-2	1.29E-1	2.85E-3	-3.06E+0	4.37E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	7.44E-1	2.83E-4	2.40E-2	7.68E-1	2.83E-4	1.48E-2	4.08E-5	-5.14E-1	2.69E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	7.44E-1	2.83E-4	2.40E-2	7.68E-1	2.83E-4	1.48E-2	4.08E-5	-5.14E-1	2.69E-1
PENRE	MJ	3.26E+0	2.09E-2	1.44E-3	3.28E+0	2.10E-2	2.21E-1	1.18E-3	-1.70E+0	1.82E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	3.26E+0	2.09E-2	1.44E-3	3.28E+0	2.10E-2	2.21E-1	1.18E-3	-1.70E+0	1.82E+0
PET	MJ	4.00E+0	2.12E-2	2.55E-2	4.05E+0	2.12E-2	2.36E-1	1.23E-3	-2.21E+0	2.09E+0
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	2.20E-3	2.23E-6	1.46E-6	2.20E-3	2.23E-6	2.22E-4	1.36E-6	-9.99E-4	1.43E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.46E-5	5.04E-8	2.73E-13	1.47E-5	5.05E-8	3.44E-7	1.37E-9	-1.51E-6	1.36E-5
NHWD	kg	1.37E-2	1.22E-3	1.05E-6	1.50E-2	1.22E-3	8.18E-3	4.89E-3	-5.86E-3	2.34E-2
RWD	kg	5.70E-6	1.34E-7	1.10E-13	5.83E-6	1.34E-7	7.95E-7	7.24E-9	-2.75E-6	4.01E-6
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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