

Environmental Profile

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

Ecochain v3.5.80



Product: 3003101 – Wadal PVC Expansion piece GY 40
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	5.02E-1	6.25E-3	1.45E-4	5.09E-1	6.23E-3	2.27E-1	1.99E-3	-2.74E-1	4.70E-1
GWP-f	kg CO2 eq	5.30E-1	6.25E-3	1.46E-4	5.37E-1	6.22E-3	1.88E-1	1.99E-3	-2.84E-1	4.49E-1
GWP-b	kg CO2 eq	-2.82E-2	3.79E-6	-1.54E-6	-2.82E-2	3.78E-6	3.86E-2	2.51E-6	1.07E-2	2.11E-2
GWP-luluc	kg CO2 eq	5.00E-4	2.21E-6	1.49E-7	5.02E-4	2.20E-6	7.80E-5	5.12E-8	-2.72E-4	3.10E-4
ODP	kg CFC11 eq	2.69E-7	1.44E-9	8.26E-12	2.70E-7	1.43E-9	2.15E-8	7.38E-11	-1.33E-7	1.60E-7
AP	mol H+ eq	2.45E-3	3.56E-5	1.47E-6	2.49E-3	3.54E-5	3.66E-4	1.79E-6	-1.10E-3	1.79E-3
EP-fw	kg P eq	2.34E-5	5.14E-8	8.24E-9	2.34E-5	5.12E-8	2.61E-6	2.33E-9	-1.10E-5	1.51E-5
EP-m	kg N eq	4.27E-4	1.27E-5	1.55E-7	4.40E-4	1.27E-5	8.93E-5	1.13E-6	-1.97E-4	3.47E-4
EP-T	mol N eq	4.61E-3	1.40E-4	1.85E-6	4.75E-3	1.40E-4	9.85E-4	7.15E-6	-2.11E-3	3.77E-3
POCP	kg NMVOC eq	1.56E-3	4.01E-5	6.28E-7	1.60E-3	3.99E-5	2.94E-4	2.47E-6	-7.24E-4	1.21E-3
ADP-mm	kg Sb eq	2.55E-4	1.62E-7	1.97E-8	2.55E-4	1.61E-7	1.44E-6	1.79E-9	-5.55E-6	2.51E-4
ADP-f	MJ	1.32E+1	9.59E-2	1.36E-3	1.33E+1	9.55E-2	9.87E-1	5.39E-3	-6.82E+0	7.57E+0
WDP	m3 depriv.	8.22E-1	2.94E-4	5.22E-5	8.22E-1	2.93E-4	3.93E-2	3.22E-5	-3.98E-1	4.64E-1
PM	disease inc.	1.72E-8	5.64E-10	9.08E-12	1.78E-8	5.62E-10	4.51E-9	3.71E-11	-8.18E-9	1.47E-8
IR	kBq U-235 eq	2.80E-2	4.19E-4	1.02E-6	2.85E-2	4.17E-4	3.49E-3	2.48E-5	-1.32E-2	1.92E-2
ETP-fw	CTUe	1.24E+1	7.79E-2	1.21E-2	1.25E+1	7.76E-2	7.69E+0	8.50E-2	-4.72E+0	1.56E+1
HTP-c	CTUh	4.00E-10	2.77E-12	6.17E-13	4.03E-10	2.76E-12	1.09E-10	1.47E-13	-1.58E-10	3.57E-10
HTP-nc	CTUh	1.27E-8	9.28E-11	1.57E-11	1.28E-8	9.25E-11	2.67E-9	1.63E-11	-5.09E-9	1.05E-8
SQP	Pt	4.98E+0	8.20E-2	2.24E-3	5.07E+0	8.17E-2	6.04E-1	1.38E-2	-5.25E+0	5.14E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.80E+0	1.38E-3	2.40E-2	1.82E+0	1.37E-3	7.16E-2	2.03E-4	-1.03E+0	8.65E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.80E+0	1.38E-3	2.40E-2	1.82E+0	1.37E-3	7.16E-2	2.03E-4	-1.03E+0	8.65E-1
PENRE	MJ	1.42E+1	1.02E-1	1.44E-3	1.43E+1	1.01E-1	1.05E+0	5.72E-3	-7.34E+0	8.08E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.42E+1	1.02E-1	1.44E-3	1.43E+1	1.01E-1	1.05E+0	5.72E-3	-7.34E+0	8.08E+0
PET	MJ	1.60E+1	1.03E-1	2.55E-2	1.61E+1	1.03E-1	1.12E+0	5.92E-3	-8.37E+0	8.95E+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	9.30E-3	1.08E-5	1.46E-6	9.32E-3	1.08E-5	1.08E-3	6.61E-6	-4.48E-3	5.94E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	4.08E-5	2.45E-7	2.73E-13	4.10E-5	2.44E-7	1.61E-6	6.54E-9	-5.79E-6	3.71E-5
NHWD	kg	5.26E-2	5.94E-3	1.05E-6	5.85E-2	5.92E-3	3.63E-2	2.37E-2	-2.25E-2	1.02E-1
RWD	kg	2.49E-5	6.52E-7	1.10E-13	2.55E-5	6.49E-7	3.73E-6	3.51E-8	-1.18E-5	1.81E-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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