Environmental Profile

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

Ecochain v3.5.80

Product:	3003107 - Wadal PVC Expansion piece GY 125
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

A1 Raw material supply A2 Transport A3 Manufacturing

Construction process stage

A4 Transport gate to site
A5 Assembly / Construction installation process

Use stage

B1 Use B2 Maintenance B3 Repair B4 Replacement B5 Refurbishment
B6 Operational energy use B7 Operational water use

End-of-Life stage

C1 De-construction demolition C2 Transport C3 Waste processing
C4 Disposal

Benefits and loads beyond the system boundaries

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

Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	1.75E+0	2.05E-2	1.45E-4	1.77E+0	2.33E-2	1.07E+0	7.62E-3	-1.03E+0	1.84E+0
GWP-f	kg CO2 eq	2.03E+0	2.05E-2	1.46E-4	2.05E+0	2.33E-2	7.27E-1	7.62E-3	-1.11E+0	1.70E+0
GWP-b	kg CO2 eq	-2.80E-1	1.24E-5	-1.54E-6	-2.80E-1	1.42E-5	3.38E-1	9.51E-6	8.29E-2	1.41E-1
GWP-luluc	kg CO2 eq	2.16E-3	7.26E-6	1.49E-7	2.17E-3	8.25E-6	2.89E-4	1.91E-7	-1.39E-3	1.08E-3
ODP	kg CFC11 eq	9.99E-7	4.72E-9	8.26E-12	1.00E-6	5.37E-9	8.00E-8	2.79E-10	-4.93E-7	5.96E-7
AP	mol H+ eq	9.38E-3	1.17E-4	1.47E-6	9.50E-3	1.33E-4	1.38E-3	6.76E-6	-4.42E-3	6.60E-3
EP-fw	kg P eq	8.95E-5	1.69E-7	8.24E-9	8.97E-5	1.92E-7	9.69E-6	8.73E-9	-4.51E-5	5.44E-5
EP-m	kg N eq	1.69E-3	4.18E-5	1.55E-7	1.73E-3	4.75E-5	3.42E-4	4.42E-6	-8.19E-4	1.31E-3
EP-T	mol N eq	1.81E-2	4.60E-4	1.85E-6	1.86E-2	5.24E-4	3.77E-3	2.70E-5	-8.89E-3	1.40E-2
POCP	kg NMVOC eq	6.15E-3	1.32E-4	6.28E-7	6.28E-3	1.50E-4	1.13E-3	9.33E-6	-3.02E-3	4.55E-3
ADP-mm	kg Sb eq	8.85E-4	5.30E-7	1.97E-8	8.86E-4	6.03E-7	5.42E-6	6.73E-9	-2.16E-5	8.70E-4
ADP-f	MJ	5.07E+1	3.15E-1	1.36E-3	5.10E+1	3.58E-1	3.71E+0	2.03E-2	-2.65E+1	2.87E+1
WDP	m3 depriv.	3.04E+0	9.66E-4	5.22E-5	3.04E+0	1.10E-3	1.45E-1	1.14E-4	-1.53E+0	1.65E+0
PM	disease inc.	7.11E-8	1.85E-9	9.08E-12	7.30E-8	2.11E-9	1.71E-8	1.40E-10	-3.77E-8	5.46E-8
IR	kBq U-235 eq	1.08E-1	1.38E-3	1.02E-6	1.10E-1	1.56E-3	1.31E-2	9.39E-5	-5.24E-2	7.21E-2
ETP-fw	CTUe	5.09E+1	2.56E-1	1.21E-2	5.11E+1	2.91E-1	2.84E+1	3.13E-1	-2.13E+1	5.88E+1
HTP-c	CTUh	1.53E-9	9.09E-12	6.17E-13	1.54E-9	1.03E-11	4.09E-10	5.48E-13	-6.70E-10	1.29E-9
HTP-nc	CTUh	4.70E-8	3.05E-10	1.57E-11	4.74E-8	3.47E-10	9.92E-9	6.02E-11	-2.02E-8	3.74E-8
SQP	Pt	3.49E+1	2.69E-1	2.24E-3	3.51E+1	3.06E-1	2.27E+0	5.22E-2	-3.96E+1	-1.82E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	9.16E+0	4.51E-3	2.40E-2	9.19E+0	5.14E-3	2.66E-1	7.73E-4	-7.08E+0	2.39E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	9.16E+0	4.51E-3	2.40E-2	9.19E+0	5.14E-3	2.66E-1	7.73E-4	-7.08E+0	2.39E+0
PENRE	MJ	5.44E+1	3.34E-1	1.44E-3	5.48E+1	3.80E-1	3.95E+0	2.16E-2	-2.85E+1	3.06E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	5.44E+1	3.34E-1	1.44E-3	5.48E+1	3.80E-1	3.95E+0	2.16E-2	-2.85E+1	3.06E+1
PET	MJ	6.36E+1	3.39E-1	2.55E-2	6.39E+1	3.85E-1	4.21E+0	2.24E-2	-3.56E+1	3.30E+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	3.47E-2	3.56E-5	1.46E-6	3.47E-2	4.05E-5	4.04E-3	2.50E-5	-1.83E-2	2.05E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.43E-4	8.05E-7	2.73E-13	1.44E-4	9.16E-7	6.11E-6	2.46E-8	-2.28E-5	1.29E-4
NHWD	kg	2.04E-1	1.95E-2	1.05E-6	2.23E-1	2.22E-2	1.37E-1	8.96E-2	-9.27E-2	3.80E-1
RWD	kg	9.83E-5	2.14E-6	1.10E-13	1.00E-4	2.43E-6	1.42E-5	1.33E-7	-4.73E-5	6.99E-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

Ecochain Technologies BV
H.J.E. Wenckebachweg 123, 1096 AM Amsterdam, The Netherlands
https://www.ecochain.com
+31 20 3035 777