Environmental Profile

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

Ecochain v3.5.80

Product:	3003270 - Wadal PVC Endpiece GY 160 +Inspect.cover
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	1.42E+0	2.16E-2	1.45E-4	1.44E+0	1.79E-2	8.30E-1	5.92E-3	-7.95E-1	1.50E+0
GWP-f	kg CO2 eq	1.61E+0	2.15E-2	1.46E-4	1.63E+0	1.79E-2	6.01E-1	5.91E-3	-8.55E-1	1.40E+0
GWP-b	kg CO2 eq	-1.85E-1	1.31E-5	-1.54E-6	-1.85E-1	1.09E-5	2.28E-1	7.37E-6	6.11E-2	1.04E-1
GWP-luluc	kg CO2 eq	1.79E-3	7.62E-6	1.49E-7	1.79E-3	6.35E-6	2.22E-4	1.53E-7	-1.05E-3	9.77E-4
ODP	kg CFC11 eq	7.84E-7	4.96E-9	8.26E-12	7.89E-7	4.13E-9	6.17E-8	2.17E-10	-3.90E-7	4.65E-7
AP	mol H+ eq	7.78E-3	1.23E-4	1.47E-6	7.91E-3	1.02E-4	1.06E-3	5.29E-6	-3.37E-3	5.71E-3
EP-fw	kg P eq	7.41E-5	1.77E-7	8.24E-9	7.42E-5	1.48E-7	7.45E-6	6.94E-9	-3.48E-5	4.71E-5
EP-m	kg N eq	1.39E-3	4.39E-5	1.55E-7	1.43E-3	3.65E-5	2.64E-4	3.57E-6	-6.22E-4	1.11E-3
EP-T	mol N eq	1.50E-2	4.84E-4	1.85E-6	1.55E-2	4.03E-4	2.91E-3	2.11E-5	-6.74E-3	1.21E-2
POCP	kg NMVOC eq	5.02E-3	1.38E-4	6.28E-7	5.15E-3	1.15E-4	8.66E-4	7.27E-6	-2.27E-3	3.87E-3
ADP-mm	kg Sb eq	1.42E-3	5.57E-7	1.97E-8	1.42E-3	4.64E-7	4.16E-6	5.30E-9	-1.73E-5	1.41E-3
ADP-f	MJ	3.91E+1	3.31E-1	1.36E-3	3.94E+1	2.75E-1	2.84E+0	1.59E-2	-2.00E+1	2.25E+1
WDP	m3 depriv.	2.38E+0	1.01E-3	5.22E-5	2.38E+0	8.45E-4	1.12E-1	1.04E-4	-1.19E+0	1.31E+0
PM	disease inc.	5.82E-8	1.94E-9	9.08E-12	6.02E-8	1.62E-9	1.31E-8	1.09E-10	-2.80E-8	4.70E-8
IR	kBq U-235 eq	8.98E-2	1.45E-3	1.02E-6	9.12E-2	1.20E-3	1.01E-2	7.30E-5	-4.07E-2	6.19E-2
ETP-fw	CTUe	4.76E+1	2.68E-1	1.21E-2	4.79E+1	2.23E-1	2.20E+1	2.43E-1	-1.63E+1	5.41E+1
HTP-c	CTUh	1.41E-9	9.55E-12	6.17E-13	1.42E-9	7.95E-12	3.22E-10	4.39E-13	-5.11E-10	1.23E-9
HTP-nc	CTUh	4.28E-8	3.20E-10	1.57E-11	4.32E-8	2.66E-10	7.68E-9	4.68E-11	-1.57E-8	3.54E-8
SQP	Pt	2.49E+1	2.83E-1	2.24E-3	2.52E+1	2.35E-1	1.74E+0	4.06E-2	-2.79E+1	-6.63E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	8.95E+0	4.74E-3	2.40E-2	8.97E+0	3.95E-3	2.04E-1	5.97E-4	-5.05E+0	4.14E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	8.95E+0	4.74E-3	2.40E-2	8.97E+0	3.95E-3	2.04E-1	5.97E-4	-5.05E+0	4.14E+0
PENRE	MJ	4.19E+1	3.51E-1	1.44E-3	4.23E+1	2.92E-1	3.02E+0	1.68E-2	-2.16E+1	2.40E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	4.19E+1	3.51E-1	1.44E-3	4.23E+1	2.92E-1	3.02E+0	1.68E-2	-2.16E+1	2.40E+1
PET	MJ	5.09E+1	3.56E-1	2.55E-2	5.12E+1	2.96E-1	3.23E+0	1.74E-2	-2.66E+1	2.81E+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	2.82E-2	3.74E-5	1.46E-6	2.82E-2	3.11E-5	3.16E-3	1.94E-5	-1.41E-2	1.73E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.02E-4	8.45E-7	2.73E-13	2.03E-4	7.04E-7	4.71E-6	1.93E-8	-1.79E-5	1.91E-4
NHWD	kg	1.66E-1	2.05E-2	1.05E-6	1.87E-1	1.71E-2	1.06E-1	6.96E-2	-7.10E-2	3.08E-1
RWD	kg	8.25E-5	2.25E-6	1.10E-13	8.47E-5	1.87E-6	1.08E-5	1.03E-7	-3.68E-5	6.08E-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