Environmental Profile

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

Ecochain v3.5.80

Product:	3003242 - Wadal PVC Reducer bush GY 160x110
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	7.44E-1	1.16E-2	1.45E-4	7.56E-1	9.93E-3	4.46E-1	3.15E-3	-4.33E-1	7.81E-1
GWP-f	kg CO2 eq	8.68E-1	1.15E-2	1.46E-4	8.79E-1	9.92E-3	2.95E-1	3.15E-3	-4.69E-1	7.18E-1
GWP-b	kg CO2 eq	-1.24E-1	7.01E-6	-1.54E-6	-1.24E-1	6.02E-6	1.50E-1	3.98E-6	3.65E-2	6.26E-2
GWP-luluc	kg CO2 eq	9.92E-4	4.09E-6	1.49E-7	9.96E-4	3.51E-6	1.26E-4	8.29E-8	-6.13E-4	5.12E-4
ODP	kg CFC11 eq	4.34E-7	2.66E-9	8.26E-12	4.37E-7	2.29E-9	3.49E-8	1.17E-10	-2.19E-7	2.55E-7
AP	mol H+ eq	4.16E-3	6.58E-5	1.47E-6	4.23E-3	5.65E-5	5.97E-4	2.86E-6	-1.91E-3	2.97E-3
EP-fw	kg P eq	4.05E-5	9.50E-8	8.24E-9	4.06E-5	8.16E-8	4.21E-6	3.75E-9	-1.99E-5	2.50E-5
EP-m	kg N eq	7.51E-4	2.35E-5	1.55E-7	7.75E-4	2.02E-5	1.47E-4	1.77E-6	-3.54E-4	5.90E-4
EP-T	mol N eq	8.14E-3	2.59E-4	1.85E-6	8.40E-3	2.23E-4	1.62E-3	1.14E-5	-3.84E-3	6.42E-3
POCP	kg NMVOC eq	2.65E-3	7.41E-5	6.28E-7	2.73E-3	6.37E-5	4.85E-4	3.92E-6	-1.29E-3	1.99E-3
ADP-mm	kg Sb eq	7.45E-4	2.99E-7	1.97E-8	7.45E-4	2.57E-7	2.35E-6	2.87E-9	-9.25E-6	7.39E-4
ADP-f	MJ	2.09E+1	1.77E-1	1.36E-3	2.11E+1	1.52E-1	1.60E+0	8.58E-3	-1.11E+1	1.18E+1
WDP	m3 depriv.	1.32E+0	5.44E-4	5.22E-5	1.32E+0	4.67E-4	6.31E-2	5.63E-5	-6.74E-1	7.10E-1
PM	disease inc.	3.04E-8	1.04E-9	9.08E-12	3.14E-8	8.95E-10	7.38E-9	5.91E-11	-1.63E-8	2.35E-8
IR	kBq U-235 eq	4.69E-2	7.75E-4	1.02E-6	4.77E-2	6.66E-4	5.70E-3	3.94E-5	-2.31E-2	3.10E-2
ETP-fw	CTUe	2.59E+1	1.44E-1	1.21E-2	2.61E+1	1.24E-1	1.24E+1	1.37E-1	-9.39E+0	2.93E+1
HTP-c	CTUh	7.75E-10	5.12E-12	6.17E-13	7.81E-10	4.40E-12	1.82E-10	2.38E-13	-2.96E-10	6.72E-10
HTP-nc	CTUh	2.35E-8	1.72E-10	1.57E-11	2.37E-8	1.47E-10	4.32E-9	2.62E-11	-8.96E-9	1.92E-8
SQP	Pt	1.56E+1	1.52E-1	2.24E-3	1.58E+1	1.30E-1	9.81E-1	2.20E-2	-1.75E+1	-6.10E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	5.15E+0	2.54E-3	2.40E-2	5.17E+0	2.18E-3	1.16E-1	3.20E-4	-3.13E+0	2.16E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	5.15E+0	2.54E-3	2.40E-2	5.17E+0	2.18E-3	1.16E-1	3.20E-4	-3.13E+0	2.16E+0
PENRE	MJ	2.24E+1	1.88E-1	1.44E-3	2.26E+1	1.62E-1	1.71E+0	9.11E-3	-1.19E+1	1.26E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.24E+1	1.88E-1	1.44E-3	2.26E+1	1.62E-1	1.71E+0	9.11E-3	-1.19E+1	1.26E+1
PET	MJ	2.76E+1	1.91E-1	2.55E-2	2.78E+1	1.64E-1	1.82E+0	9.43E-3	-1.51E+1	1.47E+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	1.52E-2	2.01E-5	1.46E-6	1.52E-2	1.72E-5	1.74E-3	1.05E-5	-8.02E-3	8.98E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.09E-4	4.53E-7	2.73E-13	1.09E-4	3.89E-7	2.64E-6	1.05E-8	-9.92E-6	1.02E-4
NHWD	kg	9.25E-2	1.10E-2	1.05E-6	1.03E-1	9.44E-3	5.89E-2	3.77E-2	-4.09E-2	1.69E-1
RWD	kg	4.14E-5	1.21E-6	1.10E-13	4.26E-5	1.04E-6	6.12E-6	5.58E-8	-2.08E-5	2.91E-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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