Environmental Profile

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

Ecochain v3.5.80

Product:	3003234 - Wadal PVC Reducer bush GY 110x75
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	2.84E-1	4.62E-3	1.45E-4	2.89E-1	3.90E-3	1.91E-1	1.24E-3	-1.73E-1	3.13E-1
GWP-f	kg CO2 eq	3.47E-1	4.62E-3	1.46E-4	3.52E-1	3.89E-3	1.17E-1	1.24E-3	-1.88E-1	2.86E-1
GWP-b	kg CO2 eq	-6.30E-2	2.81E-6	-1.54E-6	-6.30E-2	2.36E-6	7.38E-2	1.56E-6	1.56E-2	2.64E-2
GWP-luluc	kg CO2 eq	4.07E-4	1.63E-6	1.49E-7	4.08E-4	1.38E-6	4.93E-5	3.27E-8	-2.56E-4	2.03E-4
ODP	kg CFC11 eq	1.70E-7	1.06E-9	8.26E-12	1.71E-7	8.97E-10	1.37E-8	4.61E-11	-8.64E-8	9.93E-8
AP	mol H+ eq	1.67E-3	2.63E-5	1.47E-6	1.70E-3	2.22E-5	2.35E-4	1.12E-6	-7.72E-4	1.19E-3
EP-fw	kg P eq	1.62E-5	3.80E-8	8.24E-9	1.62E-5	3.20E-8	1.65E-6	1.48E-9	-8.03E-6	9.90E-6
EP-m	kg N eq	3.04E-4	9.42E-6	1.55E-7	3.13E-4	7.93E-6	5.83E-5	6.93E-7	-1.44E-4	2.36E-4
EP-T	mol N eq	3.30E-3	1.04E-4	1.85E-6	3.41E-3	8.74E-5	6.42E-4	4.48E-6	-1.57E-3	2.57E-3
POCP	kg NMVOC eq	1.08E-3	2.97E-5	6.28E-7	1.11E-3	2.50E-5	1.92E-4	1.54E-6	-5.28E-4	7.96E-4
ADP-mm	kg Sb eq	2.98E-4	1.20E-7	1.97E-8	2.98E-4	1.01E-7	9.26E-7	1.13E-9	-3.67E-6	2.96E-4
ADP-f	MJ	8.29E+0	7.09E-2	1.36E-3	8.36E+0	5.97E-2	6.31E-1	3.37E-3	-4.41E+0	4.65E+0
WDP	m3 depriv.	5.19E-1	2.18E-4	5.22E-5	5.19E-1	1.83E-4	2.47E-2	2.29E-5	-2.67E-1	2.77E-1
PM	disease inc.	1.25E-8	4.17E-10	9.08E-12	1.30E-8	3.51E-10	2.91E-9	2.32E-11	-6.79E-9	9.46E-9
IR	kBq U-235 eq	1.86E-2	3.10E-4	1.02E-6	1.89E-2	2.61E-4	2.24E-3	1.55E-5	-9.21E-3	1.22E-2
ETP-fw	CTUe	1.05E+1	5.76E-2	1.21E-2	1.06E+1	4.85E-2	4.84E+0	5.33E-2	-3.85E+0	1.17E+1
HTP-c	CTUh	3.23E-10	2.05E-12	6.17E-13	3.26E-10	1.73E-12	7.22E-11	9.38E-14	-1.22E-10	2.78E-10
HTP-nc	CTUh	9.45E-9	6.86E-11	1.57E-11	9.54E-9	5.78E-11	1.70E-9	1.02E-11	-3.48E-9	7.82E-9
SQP	Pt	7.39E+0	6.07E-2	2.24E-3	7.46E+0	5.11E-2	3.87E-1	8.63E-3	-8.11E+0	-2.02E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.21E+0	1.02E-3	2.40E-2	2.24E+0	8.57E-4	4.53E-2	1.25E-4	-1.42E+0	8.65E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.21E+0	1.02E-3	2.40E-2	2.24E+0	8.57E-4	4.53E-2	1.25E-4	-1.42E+0	8.65E-1
PENRE	MJ	8.89E+0	7.53E-2	1.44E-3	8.97E+0	6.34E-2	6.71E-1	3.58E-3	-4.75E+0	4.96E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	8.89E+0	7.53E-2	1.44E-3	8.97E+0	6.34E-2	6.71E-1	3.58E-3	-4.75E+0	4.96E+0
PET	MJ	1.11E+1	7.63E-2	2.55E-2	1.12E+1	6.43E-2	7.17E-1	3.70E-3	-6.16E+0	5.83E+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	6.05E-3	8.02E-6	1.46E-6	6.06E-3	6.76E-6	6.79E-4	4.12E-6	-3.21E-3	3.53E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	4.36E-5	1.81E-7	2.73E-13	4.38E-5	1.53E-7	1.04E-6	4.11E-9	-4.06E-6	4.10E-5
NHWD	kg	3.79E-2	4.39E-3	1.05E-6	4.23E-2	3.70E-3	2.33E-2	1.48E-2	-1.68E-2	6.73E-2
RWD	kg	1.65E-5	4.82E-7	1.10E-13	1.70E-5	4.06E-7	2.42E-6	2.19E-8	-8.33E-6	1.15E-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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