Environmental Profile

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

Ecochain v3.5.80

Product:	3003239 - Wadal PVC Reducer bush GY 125x50
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	3.63E-1	5.40E-3	1.45E-4	3.69E-1	4.82E-3	2.21E-1	1.53E-3	-2.14E-1	3.82E-1
GWP-f	kg CO2 eq	4.25E-1	5.39E-3	1.46E-4	4.30E-1	4.81E-3	1.48E-1	1.53E-3	-2.29E-1	3.55E-1
GWP-b	kg CO2 eq	-6.23E-2	3.27E-6	-1.54E-6	-6.23E-2	2.92E-6	7.38E-2	1.93E-6	1.52E-2	2.67E-2
GWP-luluc	kg CO2 eq	4.77E-4	1.91E-6	1.49E-7	4.79E-4	1.70E-6	6.07E-5	4.05E-8	-2.81E-4	2.60E-4
ODP	kg CFC11 eq	2.09E-7	1.24E-9	8.26E-12	2.11E-7	1.11E-9	1.68E-8	5.70E-11	-1.07E-7	1.22E-7
AP	mol H+ eq	2.05E-3	3.07E-5	1.47E-6	2.08E-3	2.74E-5	2.89E-4	1.39E-6	-9.21E-4	1.48E-3
EP-fw	kg P eq	1.98E-5	4.44E-8	8.24E-9	1.99E-5	3.96E-8	2.03E-6	1.83E-9	-9.46E-6	1.25E-5
EP-m	kg N eq	3.68E-4	1.10E-5	1.55E-7	3.79E-4	9.81E-6	7.12E-5	8.57E-7	-1.70E-4	2.90E-4
EP-T	mol N eq	4.00E-3	1.21E-4	1.85E-6	4.13E-3	1.08E-4	7.85E-4	5.54E-6	-1.85E-3	3.18E-3
POCP	kg NMVOC eq	1.31E-3	3.46E-5	6.28E-7	1.34E-3	3.09E-5	2.34E-4	1.91E-6	-6.23E-4	9.89E-4
ADP-mm	kg Sb eq	3.96E-4	1.40E-7	1.97E-8	3.96E-4	1.25E-7	1.13E-6	1.40E-9	-4.48E-6	3.93E-4
ADP-f	MJ	1.02E+1	8.28E-2	1.36E-3	1.03E+1	7.39E-2	7.75E-1	4.17E-3	-5.41E+0	5.77E+0
WDP	m3 depriv.	6.42E-1	2.54E-4	5.22E-5	6.42E-1	2.27E-4	3.05E-2	2.85E-5	-3.24E-1	3.49E-1
PM	disease inc.	1.49E-8	4.87E-10	9.08E-12	1.54E-8	4.34E-10	3.57E-9	2.87E-11	-7.71E-9	1.17E-8
IR	kBq U-235 eq	2.29E-2	3.62E-4	1.02E-6	2.32E-2	3.23E-4	2.75E-3	1.91E-5	-1.11E-2	1.53E-2
ETP-fw	CTUe	1.27E+1	6.72E-2	1.21E-2	1.28E+1	6.00E-2	5.98E+0	6.59E-2	-4.38E+0	1.45E+1
HTP-c	CTUh	3.86E-10	2.39E-12	6.17E-13	3.89E-10	2.13E-12	8.89E-11	1.16E-13	-1.43E-10	3.37E-10
HTP-nc	CTUh	1.16E-8	8.01E-11	1.57E-11	1.17E-8	7.15E-11	2.09E-9	1.27E-11	-4.31E-9	9.61E-9
SQP	Pt	7.68E+0	7.08E-2	2.24E-3	7.76E+0	6.32E-2	4.75E-1	1.07E-2	-8.19E+0	1.09E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.54E+0	1.19E-3	2.40E-2	2.56E+0	1.06E-3	5.58E-2	1.55E-4	-1.46E+0	1.16E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.54E+0	1.19E-3	2.40E-2	2.56E+0	1.06E-3	5.58E-2	1.55E-4	-1.46E+0	1.16E+0
PENRE	MJ	1.10E+1	8.79E-2	1.44E-3	1.11E+1	7.84E-2	8.25E-1	4.42E-3	-5.83E+0	6.15E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.10E+1	8.79E-2	1.44E-3	1.11E+1	7.84E-2	8.25E-1	4.42E-3	-5.83E+0	6.15E+0
PET	MJ	1.35E+1	8.91E-2	2.55E-2	1.36E+1	7.95E-2	8.81E-1	4.58E-3	-7.28E+0	7.31E+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	7.48E-3	9.37E-6	1.46E-6	7.49E-3	8.36E-6	8.38E-4	5.10E-6	-3.80E-3	4.54E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	5.72E-5	2.12E-7	2.73E-13	5.75E-5	1.89E-7	1.27E-6	5.09E-9	-4.84E-6	5.41E-5
NHWD	kg	4.53E-2	5.13E-3	1.05E-6	5.04E-2	4.58E-3	2.87E-2	1.83E-2	-1.98E-2	8.22E-2
RWD	kg	2.02E-5	5.63E-7	1.10E-13	2.07E-5	5.02E-7	2.96E-6	2.71E-8	-9.97E-6	1.42E-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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