Environmental Profile

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

Ecochain v3.5.80

Product:	3003230 - Wadal PVC Reducer bush GY 110x40
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	2.80E-1	4.51E-3	1.45E-4	2.84E-1	3.84E-3	1.90E-1	1.22E-3	-1.70E-1	3.09E-1
GWP-f	kg CO2 eq	3.42E-1	4.51E-3	1.46E-4	3.47E-1	3.84E-3	1.16E-1	1.22E-3	-1.86E-1	2.82E-1
GWP-b	kg CO2 eq	-6.31E-2	2.74E-6	-1.54E-6	-6.31E-2	2.33E-6	7.38E-2	1.54E-6	1.56E-2	2.64E-2
GWP-luluc	kg CO2 eq	4.03E-4	1.60E-6	1.49E-7	4.05E-4	1.36E-6	4.86E-5	3.23E-8	-2.54E-4	2.01E-4
ODP	kg CFC11 eq	1.68E-7	1.04E-9	8.26E-12	1.69E-7	8.85E-10	1.35E-8	4.55E-11	-8.53E-8	9.79E-8
AP	mol H+ eq	1.65E-3	2.57E-5	1.47E-6	1.68E-3	2.19E-5	2.32E-4	1.11E-6	-7.63E-4	1.17E-3
EP-fw	kg P eq	1.60E-5	3.71E-8	8.24E-9	1.61E-5	3.16E-8	1.63E-6	1.46E-9	-7.95E-6	9.77E-6
EP-m	kg N eq	3.01E-4	9.19E-6	1.55E-7	3.10E-4	7.82E-6	5.75E-5	6.84E-7	-1.43E-4	2.33E-4
EP-T	mol N eq	3.26E-3	1.01E-4	1.85E-6	3.37E-3	8.62E-5	6.34E-4	4.42E-6	-1.55E-3	2.54E-3
POCP	kg NMVOC eq	1.06E-3	2.90E-5	6.28E-7	1.09E-3	2.47E-5	1.89E-4	1.52E-6	-5.23E-4	7.86E-4
ADP-mm	kg Sb eq	2.98E-4	1.17E-7	1.97E-8	2.98E-4	9.93E-8	9.14E-7	1.11E-9	-3.62E-6	2.95E-4
ADP-f	MJ	8.18E+0	6.92E-2	1.36E-3	8.26E+0	5.89E-2	6.23E-1	3.32E-3	-4.35E+0	4.59E+0
WDP	m3 depriv.	5.12E-1	2.12E-4	5.22E-5	5.12E-1	1.81E-4	2.43E-2	2.27E-5	-2.64E-1	2.73E-1
PM	disease inc.	1.24E-8	4.07E-10	9.08E-12	1.28E-8	3.47E-10	2.88E-9	2.29E-11	-6.74E-9	9.32E-9
IR	kBq U-235 eq	1.84E-2	3.03E-4	1.02E-6	1.87E-2	2.58E-4	2.21E-3	1.53E-5	-9.11E-3	1.21E-2
ETP-fw	CTUe	1.04E+1	5.62E-2	1.21E-2	1.05E+1	4.79E-2	4.78E+0	5.26E-2	-3.82E+0	1.16E+1
HTP-c	CTUh	3.19E-10	2.00E-12	6.17E-13	3.22E-10	1.70E-12	7.13E-11	9.26E-14	-1.21E-10	2.74E-10
HTP-nc	CTUh	9.34E-9	6.70E-11	1.57E-11	9.42E-9	5.70E-11	1.67E-9	1.01E-11	-3.44E-9	7.72E-9
SQP	Pt	7.38E+0	5.92E-2	2.24E-3	7.44E+0	5.04E-2	3.82E-1	8.51E-3	-8.10E+0	-2.22E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.17E+0	9.93E-4	2.40E-2	2.19E+0	8.45E-4	4.47E-2	1.23E-4	-1.42E+0	8.22E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.17E+0	9.93E-4	2.40E-2	2.19E+0	8.45E-4	4.47E-2	1.23E-4	-1.42E+0	8.22E-1
PENRE	MJ	8.78E+0	7.35E-2	1.44E-3	8.85E+0	6.26E-2	6.62E-1	3.53E-3	-4.69E+0	4.90E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	8.78E+0	7.35E-2	1.44E-3	8.85E+0	6.26E-2	6.62E-1	3.53E-3	-4.69E+0	4.90E+0
PET	MJ	1.09E+1	7.45E-2	2.55E-2	1.10E+1	6.34E-2	7.07E-1	3.65E-3	-6.10E+0	5.72E+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	5.97E-3	7.83E-6	1.46E-6	5.98E-3	6.67E-6	6.70E-4	4.07E-6	-3.18E-3	3.48E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	4.35E-5	1.77E-7	2.73E-13	4.37E-5	1.51E-7	1.03E-6	4.06E-9	-4.01E-6	4.09E-5
NHWD	kg	3.75E-2	4.29E-3	1.05E-6	4.18E-2	3.65E-3	2.30E-2	1.46E-2	-1.66E-2	6.64E-2
RWD	kg	1.63E-5	4.71E-7	1.10E-13	1.68E-5	4.01E-7	2.39E-6	2.16E-8	-8.24E-6	1.13E-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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