Environmental Profile

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

Ecochain v3.5.80

Product:	3003223 - Wadal PVC Reducer bush GY 75x40
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	1.75E-1	2.64E-3	1.45E-4	1.78E-1	2.26E-3	1.11E-1	7.25E-4	-1.04E-1	1.89E-1
GWP-f	kg CO2 eq	2.07E-1	2.63E-3	1.46E-4	2.09E-1	2.26E-3	7.43E-2	7.25E-4	-1.12E-1	1.75E-1
GWP-b	kg CO2 eq	-3.14E-2	1.60E-6	-1.54E-6	-3.14E-2	1.37E-6	3.70E-2	9.03E-7	7.82E-3	1.34E-2
GWP-luluc	kg CO2 eq	2.35E-4	9.32E-7	1.49E-7	2.36E-4	8.00E-7	2.84E-5	1.94E-8	-1.38E-4	1.28E-4
ODP	kg CFC11 eq	9.75E-8	6.07E-10	8.26E-12	9.81E-8	5.21E-10	7.84E-9	2.68E-11	-5.04E-8	5.60E-8
AP	mol H+ eq	1.00E-3	1.50E-5	1.47E-6	1.02E-3	1.29E-5	1.36E-4	6.54E-7	-4.41E-4	7.28E-4
EP-fw	kg P eq	9.57E-6	2.17E-8	8.24E-9	9.60E-6	1.86E-8	9.49E-7	8.69E-10	-4.53E-6	6.04E-6
EP-m	kg N eq	1.80E-4	5.37E-6	1.55E-7	1.86E-4	4.61E-6	3.38E-5	4.00E-7	-8.21E-5	1.43E-4
EP-T	mol N eq	1.97E-3	5.92E-5	1.85E-6	2.03E-3	5.08E-5	3.72E-4	2.60E-6	-8.92E-4	1.57E-3
POCP	kg NMVOC eq	6.46E-4	1.69E-5	6.28E-7	6.64E-4	1.45E-5	1.11E-4	8.97E-7	-3.01E-4	4.89E-4
ADP-mm	kg Sb eq	1.98E-4	6.81E-8	1.97E-8	1.98E-4	5.85E-8	5.32E-7	6.60E-10	-2.11E-6	1.97E-4
ADP-f	MJ	4.95E+0	4.04E-2	1.36E-3	4.99E+0	3.47E-2	3.64E-1	1.96E-3	-2.61E+0	2.79E+0
WDP	m3 depriv.	3.04E-1	1.24E-4	5.22E-5	3.04E-1	1.06E-4	1.42E-2	1.46E-5	-1.53E-1	1.65E-1
PM	disease inc.	7.39E-9	2.38E-10	9.08E-12	7.64E-9	2.04E-10	1.68E-9	1.35E-11	-3.74E-9	5.80E-9
IR	kBq U-235 eq	1.09E-2	1.77E-4	1.02E-6	1.11E-2	1.52E-4	1.29E-3	8.97E-6	-5.26E-3	7.30E-3
ETP-fw	CTUe	6.24E+0	3.28E-2	1.21E-2	6.29E+0	2.82E-2	2.77E+0	3.05E-2	-2.13E+0	6.99E+0
HTP-c	CTUh	1.90E-10	1.17E-12	6.17E-13	1.92E-10	1.00E-12	4.31E-11	5.54E-14	-6.84E-11	1.67E-10
HTP-nc	CTUh	5.62E-9	3.91E-11	1.57E-11	5.67E-9	3.36E-11	9.82E-10	5.88E-12	-1.99E-9	4.70E-9
SQP	Pt	3.83E+0	3.46E-2	2.24E-3	3.86E+0	2.97E-2	2.24E-1	5.01E-3	-4.11E+0	1.11E-2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.17E+0	5.80E-4	2.40E-2	1.19E+0	4.98E-4	2.61E-2	7.21E-5	-7.28E-1	4.92E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.17E+0	5.80E-4	2.40E-2	1.19E+0	4.98E-4	2.61E-2	7.21E-5	-7.28E-1	4.92E-1
PENRE	MJ	5.31E+0	4.29E-2	1.44E-3	5.35E+0	3.68E-2	3.87E-1	2.08E-3	-2.81E+0	2.97E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	5.31E+0	4.29E-2	1.44E-3	5.35E+0	3.68E-2	3.87E-1	2.08E-3	-2.81E+0	2.97E+0
PET	MJ	6.48E+0	4.35E-2	2.55E-2	6.55E+0	3.73E-2	4.13E-1	2.15E-3	-3.53E+0	3.46E+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	3.64E-3	4.58E-6	1.46E-6	3.64E-3	3.93E-6	3.91E-4	2.39E-6	-1.82E-3	2.22E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.84E-5	1.03E-7	2.73E-13	2.85E-5	8.87E-8	6.01E-7	2.40E-9	-2.38E-6	2.69E-5
NHWD	kg	2.23E-2	2.51E-3	1.05E-6	2.48E-2	2.15E-3	1.38E-2	8.59E-3	-9.46E-3	3.98E-2
RWD	kg	9.64E-6	2.75E-7	1.10E-13	9.92E-6	2.36E-7	1.39E-6	1.27E-8	-4.76E-6	6.80E-6
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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