Environmental Profile

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

Ecochain v3.5.80

Product:	3003227 - Wadal PVC Reducer bush GY 90x75
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	2.78E-1	3.99E-3	1.45E-4	2.82E-1	3.58E-3	1.45E-1	1.14E-3	-1.57E-1	2.75E-1
GWP-f	kg CO2 eq	3.08E-1	3.99E-3	1.46E-4	3.12E-1	3.58E-3	1.08E-1	1.14E-3	-1.66E-1	2.58E-1
GWP-b	kg CO2 eq	-3.02E-2	2.42E-6	-1.54E-6	-3.02E-2	2.17E-6	3.76E-2	1.43E-6	8.93E-3	1.64E-2
GWP-luluc	kg CO2 eq	3.31E-4	1.41E-6	1.49E-7	3.32E-4	1.27E-6	4.49E-5	3.03E-8	-1.84E-4	1.94E-4
ODP	kg CFC11 eq	1.54E-7	9.19E-10	8.26E-12	1.55E-7	8.24E-10	1.24E-8	4.24E-11	-7.86E-8	8.99E-8
AP	mol H+ eq	1.48E-3	2.27E-5	1.47E-6	1.51E-3	2.04E-5	2.12E-4	1.03E-6	-6.59E-4	1.08E-3
EP-fw	kg P eq	1.44E-5	3.28E-8	8.24E-9	1.44E-5	2.94E-8	1.50E-6	1.36E-9	-6.73E-6	9.21E-6
EP-m	kg N eq	2.63E-4	8.13E-6	1.55E-7	2.71E-4	7.29E-6	5.21E-5	6.36E-7	-1.20E-4	2.11E-4
EP-T	mol N eq	2.87E-3	8.96E-5	1.85E-6	2.96E-3	8.03E-5	5.74E-4	4.11E-6	-1.30E-3	2.32E-3
POCP	kg NMVOC eq	9.36E-4	2.56E-5	6.28E-7	9.62E-4	2.30E-5	1.71E-4	1.42E-6	-4.39E-4	7.19E-4
ADP-mm	kg Sb eq	2.97E-4	1.03E-7	1.97E-8	2.97E-4	9.25E-8	8.34E-7	1.04E-9	-3.27E-6	2.95E-4
ADP-f	MJ	7.45E+0	6.12E-2	1.36E-3	7.51E+0	5.49E-2	5.72E-1	3.10E-3	-3.94E+0	4.20E+0
WDP	m3 depriv.	4.73E-1	1.88E-4	5.22E-5	4.73E-1	1.68E-4	2.26E-2	2.17E-5	-2.36E-1	2.59E-1
PM	disease inc.	1.05E-8	3.60E-10	9.08E-12	1.08E-8	3.23E-10	2.62E-9	2.13E-11	-5.22E-9	8.58E-9
IR	kBq U-235 eq	1.67E-2	2.68E-4	1.02E-6	1.69E-2	2.40E-4	2.02E-3	1.42E-5	-7.96E-3	1.13E-2
ETP-fw	CTUe	9.03E+0	4.97E-2	1.21E-2	9.09E+0	4.46E-2	4.42E+0	4.88E-2	-3.02E+0	1.06E+1
HTP-c	CTUh	2.79E-10	1.77E-12	6.17E-13	2.82E-10	1.59E-12	6.55E-11	8.67E-14	-9.89E-11	2.50E-10
HTP-nc	CTUh	8.53E-9	5.93E-11	1.57E-11	8.61E-9	5.31E-11	1.54E-9	9.37E-12	-3.05E-9	7.16E-9
SQP	Pt	4.24E+0	5.24E-2	2.24E-3	4.29E+0	4.70E-2	3.50E-1	7.93E-3	-4.52E+0	1.73E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.55E+0	8.78E-4	2.40E-2	1.58E+0	7.88E-4	4.13E-2	1.15E-4	-8.35E-1	7.84E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.55E+0	8.78E-4	2.40E-2	1.58E+0	7.88E-4	4.13E-2	1.15E-4	-8.35E-1	7.84E-1
PENRE	MJ	7.99E+0	6.50E-2	1.44E-3	8.06E+0	5.83E-2	6.08E-1	3.29E-3	-4.25E+0	4.48E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	7.99E+0	6.50E-2	1.44E-3	8.06E+0	5.83E-2	6.08E-1	3.29E-3	-4.25E+0	4.48E+0
PET	MJ	9.54E+0	6.59E-2	2.55E-2	9.63E+0	5.91E-2	6.49E-1	3.40E-3	-5.08E+0	5.26E+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	5.47E-3	6.93E-6	1.46E-6	5.48E-3	6.21E-6	6.19E-4	3.79E-6	-2.72E-3	3.39E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	4.27E-5	1.57E-7	2.73E-13	4.29E-5	1.40E-7	9.36E-7	3.79E-9	-3.49E-6	4.05E-5
NHWD	kg	3.24E-2	3.79E-3	1.05E-6	3.62E-2	3.40E-3	2.11E-2	1.36E-2	-1.39E-2	6.04E-2
RWD	kg	1.46E-5	4.16E-7	1.10E-13	1.51E-5	3.73E-7	2.17E-6	2.01E-8	-7.13E-6	1.05E-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

Ecochain Technologies BV
H.J.E. Wenckebachweg 123, 1096 AM Amsterdam, The Netherlands
https://www.ecochain.com
+31 20 3035 777