Environmental Profile

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

Ecochain v3.5.80

Product:	3025888 - PVC Reducer GY 80x40 BC
Unit:	1 Piece
Manufacturer:	Wavin - FR - Varennes

The Wavin range of PVC pipes and fittings to be glued covers all the usual diameters and allows you to create networks that are 100% compatible, homogeneous and meet the requirements of the French market.

LCA standard:	EN15804+A2 (2019)
Standard database:	Worldwide - Ecoinvent v 3.6 Cut-Off
Externally verified:	Yes
Issue date:	24-11-2022
End of validity:	24-11-2027
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 - FR - Varennes (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	1.33E-1	4.31E-3	8.63E-3	1.46E-1	1.79E-3	8.57E-2	5.48E-4	-7.47E-2	1.60E-1
GWP-f	kg CO2 eq	1.55E-1	4.31E-3	6.30E-3	1.66E-1	1.79E-3	5.70E-2	5.48E-4	-8.75E-2	1.37E-1
GWP-b	kg CO2 eq	-2.17E-2	2.62E-6	2.31E-3	-1.93E-2	1.09E-6	2.87E-2	6.89E-7	1.29E-2	2.23E-2
GWP-luluc	kg CO2 eq	2.11E-4	1.52E-6	1.20E-5	2.24E-4	6.34E-7	2.22E-5	1.48E-8	-1.52E-4	9.50E-5
ODP	kg CFC11 eq	7.51E-8	9.93E-10	8.76E-10	7.70E-8	4.12E-10	6.12E-9	2.09E-11	-3.86E-8	4.50E-8
AP	mol H+ eq	7.53E-4	2.45E-5	6.01E-5	8.38E-4	1.02E-5	1.09E-4	5.07E-7	-3.64E-4	5.93E-4
EP-fw	kg P eq	7.43E-6	3.54E-8	1.60E-7	7.63E-6	1.47E-8	7.41E-7	6.64E-10	-4.02E-6	4.37E-6
EP-m	kg N eq	1.42E-4	8.78E-6	1.59E-5	1.67E-4	3.65E-6	2.74E-5	3.09E-7	-6.90E-5	1.29E-4
EP-T	mol N eq	1.53E-3	9.68E-5	2.21E-4	1.85E-3	4.02E-5	3.02E-4	2.02E-6	-7.54E-4	1.44E-3
POCP	kg NMVOC eq	4.91E-4	2.77E-5	4.71E-5	5.66E-4	1.15E-5	9.04E-5	6.93E-7	-2.46E-4	4.23E-4
ADP-mm	kg Sb eq	1.48E-4	1.11E-7	2.65E-7	1.49E-4	4.63E-8	4.28E-7	5.10E-10	-1.64E-6	1.47E-4
ADP-f	MJ	3.80E+0	6.61E-2	8.38E-2	3.95E+0	2.75E-2	2.90E-1	1.52E-3	-2.02E+0	2.25E+0
WDP	m3 depriv.	2.30E-1	2.03E-4	1.27E-1	3.58E-1	8.43E-5	1.10E-2	1.07E-5	-1.26E-1	2.43E-1
PM	disease inc.	5.97E-9	3.89E-10	7.98E-10	7.16E-9	1.62E-10	1.36E-9	1.05E-11	-3.44E-9	5.26E-9
IR	kBq U-235 eq	8.70E-3	2.89E-4	1.98E-4	9.19E-3	1.20E-4	1.03E-3	6.98E-6	-4.41E-3	5.94E-3
ETP-fw	CTUe	5.33E+0	5.37E-2	1.45E-1	5.53E+0	2.23E-2	2.13E+0	2.33E-2	-2.13E+0	5.58E+0
HTP-c	CTUh	1.31E-10	1.91E-12	8.34E-12	1.42E-10	7.94E-13	3.41E-11	4.21E-14	-5.50E-11	1.22E-10
HTP-nc	CTUh	4.02E-9	6.40E-11	2.58E-10	4.34E-9	2.66E-11	7.67E-10	4.48E-12	-1.68E-9	3.46E-9
SQP	Pt	2.95E+0	5.66E-2	1.22E+0	4.22E+0	2.35E-2	1.79E-1	3.88E-3	-4.20E+0	2.27E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	5.66E-1	9.49E-4	3.09E-1	8.76E-1	3.94E-4	2.03E-2	5.54E-5	-7.54E-1	1.42E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	5.66E-1	9.49E-4	3.09E-1	8.76E-1	3.94E-4	2.03E-2	5.54E-5	-7.54E-1	1.42E-1
PENRE	MJ	4.08E+0	7.02E-2	9.03E-2	4.24E+0	2.92E-2	3.09E-1	1.62E-3	-2.18E+0	2.40E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	4.08E+0	7.02E-2	9.03E-2	4.24E+0	2.92E-2	3.09E-1	1.62E-3	-2.18E+0	2.40E+0
PET	MJ	4.64E+0	7.12E-2	3.99E-1	5.11E+0	2.96E-2	3.29E-1	1.67E-3	-2.93E+0	2.54E+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	2.76E-3	7.48E-6	3.00E-3	5.76E-3	3.11E-6	3.04E-4	1.86E-6	-1.64E-3	4.43E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.14E-5	1.69E-7	9.25E-8	2.16E-5	7.03E-8	4.84E-7	1.86E-9	-1.85E-6	2.03E-5
NHWD	kg	1.74E-2	4.10E-3	6.85E-4	2.22E-2	1.70E-3	1.10E-2	6.81E-3	-7.60E-3	3.41E-2
RWD	kg	7.90E-6	4.50E-7	1.87E-7	8.54E-6	1.87E-7	1.12E-6	9.91E-9	-4.00E-6	5.86E-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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