Environmental Profile

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

Ecochain v3.5.80

Product:	3025935 - PVC Eccent Reducer GY 50x40 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

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Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	6.96E-2	2.57E-3	5.17E-3	7.74E-2	1.03E-3	5.93E-2	3.15E-4	-4.06E-2	9.74E-2
GWP-f	kg CO2 eq	9.15E-2	2.57E-3	3.73E-3	9.78E-2	1.03E-3	3.12E-2	3.15E-4	-5.23E-2	7.81E-2
GWP-b	kg CO2 eq	-2.21E-2	1.56E-6	1.43E-3	-2.06E-2	6.23E-7	2.81E-2	3.91E-7	1.18E-2	1.93E-2
GWP-luluc	kg CO2 eq	1.49E-4	9.10E-7	7.67E-6	1.58E-4	3.63E-7	1.26E-5	8.65E-9	-1.22E-4	4.88E-5
ODP	kg CFC11 eq	4.31E-8	5.92E-10	5.24E-10	4.43E-8	2.37E-10	3.50E-9	1.20E-11	-2.23E-8	2.57E-8
AP	mol H+ eq	4.56E-4	1.46E-5	3.80E-5	5.09E-4	5.85E-6	6.37E-5	2.91E-7	-2.36E-4	3.43E-4
EP-fw	kg P eq	4.52E-6	2.11E-8	9.57E-8	4.63E-6	8.45E-9	4.23E-7	3.85E-10	-2.73E-6	2.34E-6
EP-m	kg N eq	9.03E-5	5.24E-6	9.96E-6	1.06E-4	2.09E-6	1.64E-5	1.75E-7	-4.62E-5	7.80E-5
EP-T	mol N eq	9.66E-4	5.77E-5	1.40E-4	1.16E-3	2.31E-5	1.80E-4	1.16E-6	-5.10E-4	8.59E-4
POCP	kg NMVOC eq	3.00E-4	1.65E-5	2.94E-5	3.46E-4	6.59E-6	5.41E-5	3.98E-7	-1.63E-4	2.45E-4
ADP-mm	kg Sb eq	9.84E-5	6.65E-8	1.71E-7	9.86E-5	2.66E-8	2.52E-7	2.94E-10	-9.85E-7	9.79E-5
ADP-f	MJ	2.20E+0	3.94E-2	4.93E-2	2.29E+0	1.58E-2	1.69E-1	8.73E-4	-1.19E+0	1.28E+0
WDP	m3 depriv.	1.30E-1	1.21E-4	7.07E-2	2.01E-1	4.84E-5	6.21E-3	6.82E-6	-7.84E-2	1.28E-1
PM	disease inc.	3.98E-9	2.32E-10	5.00E-10	4.71E-9	9.27E-11	8.11E-10	6.00E-12	-2.55E-9	3.07E-9
IR	kBq U-235 eq	5.29E-3	1.72E-4	1.12E-4	5.57E-3	6.89E-5	6.03E-4	3.98E-6	-2.84E-3	3.41E-3
ETP-fw	CTUe	3.73E+0	3.20E-2	9.19E-2	3.85E+0	1.28E-2	1.20E+0	1.30E-2	-1.58E+0	3.49E+0
HTP-c	CTUh	8.31E-11	1.14E-12	5.12E-12	8.94E-11	4.55E-13	2.04E-11	2.45E-14	-3.73E-11	7.29E-11
HTP-nc	CTUh	2.44E-9	3.82E-11	1.62E-10	2.64E-9	1.53E-11	4.40E-10	2.51E-12	-1.07E-9	2.02E-9
SQP	Pt	2.68E+0	3.37E-2	7.99E-1	3.51E+0	1.35E-2	1.05E-1	2.22E-3	-3.88E+0	-2.51E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	4.76E-1	5.66E-4	2.03E-1	6.79E-1	2.26E-4	1.16E-2	3.13E-5	-6.77E-1	1.35E-2
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	4.76E-1	5.66E-4	2.03E-1	6.79E-1	2.26E-4	1.16E-2	3.13E-5	-6.77E-1	1.35E-2
PENRE	MJ	2.36E+0	4.19E-2	5.30E-2	2.45E+0	1.67E-2	1.80E-1	9.27E-4	-1.28E+0	1.36E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.36E+0	4.19E-2	5.30E-2	2.45E+0	1.67E-2	1.80E-1	9.27E-4	-1.28E+0	1.36E+0
PET	MJ	2.83E+0	4.24E-2	2.56E-1	3.13E+0	1.70E-2	1.92E-1	9.58E-4	-1.96E+0	1.38E+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	1.60E-3	4.46E-6	1.66E-3	3.27E-3	1.78E-6	1.72E-4	1.06E-6	-1.11E-3	2.33E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.41E-5	1.01E-7	5.12E-8	1.42E-5	4.03E-8	2.87E-7	1.07E-9	-1.14E-6	1.34E-5
NHWD	kg	1.10E-2	2.44E-3	3.80E-4	1.38E-2	9.77E-4	6.42E-3	3.90E-3	-5.05E-3	2.00E-2
RWD	kg	4.95E-6	2.68E-7	1.04E-7	5.32E-6	1.07E-7	6.68E-7	5.67E-9	-2.60E-6	3.50E-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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