Environmental Profile

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

Ecochain v3.5.80

Product:	4005581 - PVC Expansion Coupler GY 110 SC/SP
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	6.76E-1	2.74E-2	3.25E-2	7.35E-1	9.13E-3	4.10E-1	3.09E-3	-3.77E-1	7.81E-1
GWP-f	kg CO2 eq	8.02E-1	2.74E-2	2.53E-2	8.54E-1	9.12E-3	2.95E-1	3.08E-3	-4.27E-1	7.34E-1
GWP-b	kg CO2 eq	-1.27E-1	1.66E-5	7.17E-3	-1.20E-1	5.54E-6	1.15E-1	3.68E-6	5.13E-2	4.64E-2
GWP-luluc	kg CO2 eq	1.11E-3	9.69E-6	2.78E-5	1.15E-3	3.23E-6	1.05E-4	7.78E-8	-6.43E-4	6.12E-4
ODP	kg CFC11 eq	3.53E-7	6.31E-9	3.33E-9	3.63E-7	2.10E-9	2.84E-8	1.10E-10	-1.78E-7	2.16E-7
AP	mol H+ eq	3.95E-3	1.56E-4	1.58E-4	4.26E-3	5.19E-5	5.16E-4	2.67E-6	-1.72E-3	3.11E-3
EP-fw	kg P eq	3.74E-5	2.25E-7	6.09E-7	3.82E-5	7.50E-8	3.50E-6	3.50E-9	-1.81E-5	2.38E-5
EP-m	kg N eq	7.34E-4	5.58E-5	4.53E-5	8.35E-4	1.86E-5	1.31E-4	1.82E-6	-3.22E-4	6.64E-4
EP-T	mol N eq	7.99E-3	6.15E-4	5.63E-4	9.16E-3	2.05E-4	1.44E-3	1.06E-5	-3.51E-3	7.30E-3
POCP	kg NMVOC eq	2.62E-3	1.76E-4	1.34E-4	2.93E-3	5.86E-5	4.30E-4	3.70E-6	-1.18E-3	2.24E-3
ADP-mm	kg Sb eq	8.56E-4	7.08E-7	5.81E-7	8.58E-4	2.36E-7	2.02E-6	2.68E-9	-8.31E-6	8.52E-4
ADP-f	MJ	2.00E+1	4.20E-1	3.50E-1	2.08E+1	1.40E-1	1.39E+0	8.02E-3	-1.02E+1	1.21E+1
WDP	m3 depriv.	1.12E+0	1.29E-3	6.79E-1	1.80E+0	4.30E-4	5.20E-2	5.47E-5	-5.85E-1	1.27E+0
PM	disease inc.	3.20E-8	2.47E-9	2.25E-9	3.68E-8	8.23E-10	6.51E-9	5.51E-11	-1.57E-8	2.85E-8
IR	kBq U-235 eq	4.44E-2	1.84E-3	9.77E-4	4.72E-2	6.12E-4	4.88E-3	3.68E-5	-2.03E-2	3.25E-2
ETP-fw	CTUe	2.64E+1	3.41E-1	3.73E-1	2.71E+1	1.14E-1	9.88E+0	1.08E-1	-9.27E+0	2.80E+1
HTP-c	CTUh	6.88E-10	1.21E-11	2.70E-11	7.27E-10	4.04E-12	1.60E-10	2.20E-13	-2.49E-10	6.43E-10
HTP-nc	CTUh	2.05E-8	4.07E-10	7.25E-10	2.17E-8	1.36E-10	3.61E-9	2.12E-11	-7.68E-9	1.77E-8
SQP	Pt	1.57E+1	3.60E-1	2.18E+0	1.83E+1	1.20E-1	8.67E-1	2.05E-2	-1.70E+1	2.33E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	3.11E+0	6.03E-3	5.54E-1	3.67E+0	2.01E-3	9.63E-2	2.98E-4	-3.08E+0	6.94E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	3.11E+0	6.03E-3	5.54E-1	3.67E+0	2.01E-3	9.63E-2	2.98E-4	-3.08E+0	6.94E-1
PENRE	MJ	2.15E+1	4.46E-1	3.78E-1	2.23E+1	1.49E-1	1.48E+0	8.51E-3	-1.10E+1	1.29E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.15E+1	4.46E-1	3.78E-1	2.23E+1	1.49E-1	1.48E+0	8.51E-3	-1.10E+1	1.29E+1
PET	MJ	2.46E+1	4.52E-1	9.32E-1	2.60E+1	1.51E-1	1.57E+0	8.81E-3	-1.41E+1	1.36E+1
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	1.40E-2	4.76E-5	1.59E-2	3.00E-2	1.58E-5	1.48E-3	9.81E-6	-7.50E-3	2.40E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.19E-4	1.08E-6	4.97E-7	1.21E-4	3.58E-7	2.33E-6	9.77E-9	-8.52E-6	1.15E-4
NHWD	kg	8.89E-2	2.61E-2	3.64E-3	1.19E-1	8.68E-3	5.27E-2	3.56E-2	-3.46E-2	1.81E-1
RWD	kg	4.14E-5	2.86E-6	1.00E-6	4.53E-5	9.52E-7	5.34E-6	5.22E-8	-1.84E-5	3.33E-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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