Environmental Profile

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

Ecochain v3.5.80

Product:	3025996 - PVC Expansion Coupler GY 40 SC/SP 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	2.14E-1	7.68E-3	1.15E-2	2.33E-1	2.74E-3	1.48E-1	8.94E-4	-1.04E-1	2.80E-1
GWP-f	kg CO2 eq	2.57E-1	7.67E-3	8.66E-3	2.73E-1	2.73E-3	8.59E-2	8.94E-4	-1.41E-1	2.22E-1
GWP-b	kg CO2 eq	-4.35E-2	4.66E-6	2.85E-3	-4.06E-2	1.66E-6	6.21E-2	1.09E-6	3.69E-2	5.84E-2
GWP-luluc	kg CO2 eq	4.16E-4	2.71E-6	1.33E-5	4.32E-4	9.68E-7	3.32E-5	2.29E-8	-3.54E-4	1.13E-4
ODP	kg CFC11 eq	1.14E-7	1.77E-9	1.18E-9	1.17E-7	6.30E-10	9.24E-9	3.26E-11	-5.73E-8	6.98E-8
AP	mol H+ eq	1.27E-3	4.37E-5	6.97E-5	1.38E-3	1.56E-5	1.70E-4	7.92E-7	-6.38E-4	9.27E-4
EP-fw	kg P eq	1.22E-5	6.31E-8	2.15E-7	1.25E-5	2.25E-8	1.11E-6	1.03E-9	-7.53E-6	6.08E-6
EP-m	kg N eq	2.50E-4	1.56E-5	1.90E-5	2.85E-4	5.57E-6	4.39E-5	5.24E-7	-1.25E-4	2.10E-4
EP-T	mol N eq	2.67E-3	1.72E-4	2.54E-4	3.10E-3	6.14E-5	4.83E-4	3.16E-6	-1.38E-3	2.27E-3
POCP	kg NMVOC eq	8.37E-4	4.93E-5	5.62E-5	9.42E-4	1.76E-5	1.45E-4	1.09E-6	-4.37E-4	6.68E-4
ADP-mm	kg Sb eq	2.03E-4	1.98E-7	2.89E-7	2.03E-4	7.07E-8	6.71E-7	7.94E-10	-2.69E-6	2.01E-4
ADP-f	MJ	6.22E+0	1.18E-1	1.17E-1	6.45E+0	4.20E-2	4.47E-1	2.38E-3	-3.26E+0	3.68E+0
WDP	m3 depriv.	3.50E-1	3.61E-4	2.01E-1	5.52E-1	1.29E-4	1.64E-2	1.56E-5	-2.12E-1	3.56E-1
PM	disease inc.	1.11E-8	6.92E-10	9.50E-10	1.28E-8	2.47E-10	2.16E-9	1.64E-11	-7.06E-9	8.11E-9
IR	kBq U-235 eq	1.43E-2	5.15E-4	3.00E-4	1.51E-2	1.83E-4	1.60E-3	1.10E-5	-7.67E-3	9.19E-3
ETP-fw	CTUe	1.01E+1	9.56E-2	1.67E-1	1.04E+1	3.41E-2	3.16E+0	3.42E-2	-4.53E+0	9.08E+0
HTP-c	CTUh	2.11E-10	3.40E-12	1.05E-11	2.25E-10	1.21E-12	5.17E-11	6.51E-14	-9.55E-11	1.82E-10
HTP-nc	CTUh	6.25E-9	1.14E-10	3.07E-10	6.67E-9	4.06E-11	1.16E-9	6.66E-12	-2.85E-9	5.02E-9
SQP	Pt	6.10E+0	1.01E-1	1.25E+0	7.45E+0	3.59E-2	2.76E-1	6.08E-3	-1.02E+1	-2.46E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.17E+0	1.69E-3	3.18E-1	1.49E+0	6.02E-4	3.06E-2	8.86E-5	-1.82E+0	-2.99E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.17E+0	1.69E-3	3.18E-1	1.49E+0	6.02E-4	3.06E-2	8.86E-5	-1.82E+0	-2.99E-1
PENRE	MJ	6.67E+0	1.25E-1	1.27E-1	6.92E+0	4.46E-2	4.76E-1	2.53E-3	-3.50E+0	3.94E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	6.67E+0	1.25E-1	1.27E-1	6.92E+0	4.46E-2	4.76E-1	2.53E-3	-3.50E+0	3.94E+0
PET	MJ	7.84E+0	1.27E-1	4.45E-1	8.41E+0	4.52E-2	5.06E-1	2.62E-3	-5.32E+0	3.64E+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	4.38E-3	1.33E-5	4.72E-3	9.12E-3	4.75E-6	4.65E-4	2.92E-6	-3.11E-3	6.48E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.95E-5	3.01E-7	1.47E-7	3.00E-5	1.07E-7	7.67E-7	2.90E-9	-2.96E-6	2.79E-5
NHWD	kg	3.07E-2	7.30E-3	1.08E-3	3.91E-2	2.60E-3	1.68E-2	1.06E-2	-1.31E-2	5.61E-2
RWD	kg	1.34E-5	8.01E-7	2.97E-7	1.45E-5	2.85E-7	1.77E-6	1.55E-8	-7.03E-6	9.57E-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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