Environmental Profile

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

Ecochain v3.5.80

Product:	3025702 - PVC Expansion Coupler GY 32 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	1.06E-1	4.80E-3	1.09E-2	1.22E-1	1.57E-3	1.15E-1	5.21E-4	-5.51E-2	1.84E-1
GWP-f	kg CO2 eq	1.84E-1	4.79E-3	7.64E-3	1.96E-1	1.57E-3	5.26E-2	5.21E-4	-9.20E-2	1.59E-1
GWP-b	kg CO2 eq	-7.78E-2	2.91E-6	3.28E-3	-7.45E-2	9.52E-7	6.22E-2	6.26E-7	3.72E-2	2.49E-2
GWP-luluc	kg CO2 eq	3.75E-4	1.70E-6	1.90E-5	3.96E-4	5.55E-7	1.91E-5	1.35E-8	-3.23E-4	9.20E-5
ODP	kg CFC11 eq	6.79E-8	1.10E-9	1.10E-9	7.01E-8	3.61E-10	5.38E-9	1.88E-11	-3.39E-8	4.20E-8
AP	mol H+ eq	9.41E-4	2.73E-5	9.15E-5	1.06E-3	8.93E-6	1.04E-4	4.58E-7	-4.56E-4	7.18E-4
EP-fw	kg P eq	8.89E-6	3.94E-8	2.01E-7	9.13E-6	1.29E-8	6.41E-7	6.06E-10	-5.79E-6	3.99E-6
EP-m	kg N eq	2.00E-4	9.77E-6	2.35E-5	2.33E-4	3.19E-6	2.81E-5	3.08E-7	-9.33E-5	1.71E-4
EP-T	mol N eq	2.12E-3	1.08E-4	3.40E-4	2.57E-3	3.52E-5	3.09E-4	1.83E-6	-1.05E-3	1.87E-3
POCP	kg NMVOC eq	6.59E-4	3.08E-5	6.93E-5	7.59E-4	1.01E-5	9.24E-5	6.32E-7	-3.19E-4	5.43E-4
ADP-mm	kg Sb eq	1.52E-4	1.24E-7	4.29E-7	1.52E-4	4.05E-8	4.13E-7	4.62E-10	-1.70E-6	1.51E-4
ADP-f	MJ	4.24E+0	7.36E-2	9.85E-2	4.42E+0	2.41E-2	2.68E-1	1.38E-3	-2.05E+0	2.65E+0
WDP	m3 depriv.	2.14E-1	2.26E-4	1.17E-1	3.31E-1	7.38E-5	9.29E-3	1.01E-5	-1.44E-1	1.97E-1
PM	disease inc.	9.52E-9	4.33E-10	1.18E-9	1.11E-8	1.41E-10	1.35E-9	9.45E-12	-5.89E-9	6.73E-9
IR	kBq U-235 eq	9.92E-3	3.21E-4	1.99E-4	1.04E-2	1.05E-4	9.71E-4	6.30E-6	-5.48E-3	6.05E-3
ETP-fw	CTUe	8.64E+0	5.97E-2	2.23E-1	8.92E+0	1.95E-2	1.78E+0	1.89E-2	-3.87E+0	6.87E+0
HTP-c	CTUh	1.65E-10	2.13E-12	1.16E-11	1.78E-10	6.95E-13	3.24E-11	3.83E-14	-7.07E-11	1.41E-10
HTP-nc	CTUh	4.33E-9	7.12E-11	3.83E-10	4.78E-9	2.33E-11	6.76E-10	3.71E-12	-1.99E-9	3.49E-9
SQP	Pt	8.66E+0	6.29E-2	2.09E+0	1.08E+1	2.06E-2	1.66E-1	3.50E-3	-1.01E+1	8.88E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.50E+0	1.06E-3	5.28E-1	2.03E+0	3.45E-4	1.76E-2	5.06E-5	-1.77E+0	2.81E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.50E+0	1.06E-3	5.28E-1	2.03E+0	3.45E-4	1.76E-2	5.06E-5	-1.77E+0	2.81E-1
PENRE	MJ	4.55E+0	7.81E-2	1.06E-1	4.73E+0	2.55E-2	2.86E-1	1.46E-3	-2.21E+0	2.84E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	4.55E+0	7.81E-2	1.06E-1	4.73E+0	2.55E-2	2.86E-1	1.46E-3	-2.21E+0	2.84E+0
PET	MJ	6.05E+0	7.91E-2	6.34E-1	6.77E+0	2.59E-2	3.03E-1	1.51E-3	-3.98E+0	3.12E+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	3.02E-3	8.32E-6	2.76E-3	5.79E-3	2.72E-6	2.69E-4	1.68E-6	-2.39E-3	3.67E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.20E-5	1.88E-7	8.40E-8	2.23E-5	6.15E-8	4.78E-7	1.68E-9	-2.00E-6	2.08E-5
NHWD	kg	2.44E-2	4.56E-3	6.29E-4	2.96E-2	1.49E-3	1.03E-2	6.11E-3	-9.44E-3	3.80E-2
RWD	kg	9.67E-6	5.00E-7	1.70E-7	1.03E-5	1.64E-7	1.11E-6	8.94E-9	-5.10E-6	6.52E-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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