

Environmental Profile

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

Ecochain v3.5.80



Product: 3061231 - PEXc/EVOH Pipe Ins20GY 22x3.0 L=25 CorBK
Unit: 1 piece
Manufacturer: Wavin - PL - MPC

LCA standard: EN15804+A2 (2019)
Standard database: Worldwide - Ecoinvent v 3.6 Cut-Off
Externally verified: Yes
Issue date: 30-06-2023
End of validity: 30-06-2028
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 - PL - MPC (2021). (☑ = 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					Use stage							End-of-Life stage				
A1 Raw material supply A2 Transport A3 Manufacturing					B1 Use B2 Maintenance B3 Repair B4 Replacement B5 Refurbishment B6 Operational energy use B7 Operational water use							C1 De-construction demolition C2 Transport C3 Waste processing C4 Disposal				
Construction process stage												Benefits and loads beyond the system boundaries				
A4 Transport gate to site A5 Assembly / Construction installation process												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]

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Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	1.00E+1	9.78E-1	1.84E+0	1.28E+1	1.09E-1	4.74E+1	4.79E-1	-1.42E+1	4.66E+1
GWP-f	kg CO2 eq	3.45E+1	9.77E-1	1.30E+0	3.68E+1	1.09E-1	2.11E+1	4.80E-1	-1.83E+1	4.01E+1
GWP-b	kg CO2 eq	-2.45E+1	4.35E-4	5.45E-1	-2.40E+1	6.59E-5	2.63E+1	3.61E-4	4.20E+0	6.47E+0
GWP-luluc	kg CO2 eq	4.95E-2	3.65E-4	7.84E-4	5.07E-2	3.84E-5	2.17E-4	6.95E-6	-4.12E-2	9.68E-3
ODP	kg CFC11 eq	2.25E-6	2.15E-7	7.51E-8	2.54E-6	2.50E-8	1.03E-7	1.03E-8	-2.03E-6	6.43E-7
AP	mol H+ eq	1.56E-1	6.29E-3	7.45E-3	1.70E-1	6.18E-4	5.42E-3	2.45E-4	-5.04E-2	1.25E-1
EP-fw	kg P eq	1.09E-3	9.71E-6	4.57E-5	1.14E-3	8.93E-7	8.75E-6	3.20E-7	-5.32E-4	6.23E-4
EP-m	kg N eq	3.44E-2	2.14E-3	1.13E-3	3.77E-2	2.21E-4	2.22E-3	1.77E-4	-1.34E-2	2.69E-2
EP-T	mol N eq	3.77E-1	2.36E-2	1.16E-2	4.12E-1	2.44E-3	2.48E-2	9.95E-4	-1.55E-1	2.86E-1
POCP	kg NMVOC eq	1.38E-1	6.68E-3	3.80E-3	1.48E-1	6.97E-4	6.95E-3	3.90E-4	-4.88E-2	1.07E-1
ADP-mm	kg Sb eq	5.04E-4	2.43E-5	8.79E-5	6.16E-4	2.81E-6	1.25E-5	2.46E-7	-8.69E-5	5.45E-4
ADP-f	MJ	9.28E+2	1.47E+1	1.03E+1	9.53E+2	1.67E+0	6.84E+0	7.50E-1	-3.09E+2	6.54E+2
WDP	m3 depriv.	1.95E+1	5.19E-2	3.17E-1	1.99E+1	5.11E-3	8.00E-2	3.58E-3	-7.36E+0	1.26E+1
PM	disease inc.	1.86E-6	8.64E-8	5.99E-8	2.01E-6	9.80E-9	6.25E-8	5.15E-9	-8.62E-7	1.22E-6
IR	kBq U-235 eq	1.14E+0	6.16E-2	1.26E-2	1.22E+0	7.28E-3	2.93E-2	3.49E-3	-4.74E-1	7.82E-1
ETP-fw	CTUe	8.75E+2	1.30E+1	6.01E+1	9.48E+2	1.35E+0	1.48E+1	6.73E-1	-4.28E+2	5.37E+2
HTP-c	CTUh	2.14E-8	4.29E-10	3.12E-9	2.49E-8	4.82E-11	3.55E-9	1.83E-11	-1.21E-8	1.65E-8
HTP-nc	CTUh	3.48E-7	1.42E-8	7.63E-8	4.38E-7	1.61E-9	2.93E-8	4.24E-10	-1.68E-7	3.01E-7
SQP	Pt	2.30E+3	1.25E+1	1.15E+1	2.33E+3	1.43E+0	4.14E+0	1.92E+0	-2.47E+3	-1.38E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	3.51E+2	1.91E-3	1.04E+2	4.55E+2	2.39E-2	2.34E-1	2.97E-2	-3.94E+2	6.18E+1
PERM	MJ	0	1.80E-1	0	1.80E-1	0	0	0	0	1.80E-1
PERT	MJ	3.51E+2	1.82E-1	1.04E+2	4.55E+2	2.39E-2	2.34E-1	2.97E-2	-3.94E+2	6.19E+1
PENRE	MJ	9.95E+2	3.14E-1	1.10E+1	1.01E+3	1.77E+0	7.28E+0	7.96E-1	-3.38E+2	6.78E+2
PENRM	MJ	0	1.53E+1	0	1.53E+1	0	0	0	0	1.53E+1
PENRT	MJ	9.95E+2	1.56E+1	1.10E+1	1.02E+3	1.77E+0	7.28E+0	7.96E-1	-3.38E+2	6.93E+2
PET	MJ	1.35E+3	1.58E+1	1.15E+2	1.48E+3	1.79E+0	7.51E+0	8.25E-1	-7.32E+2	7.55E+2
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	4.08E-1	1.77E-3	8.79E-3	4.18E-1	1.89E-4	6.23E-3	9.26E-4	-1.97E-1	2.29E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	4.45E-4	3.67E-5	7.85E-6	4.90E-4	4.26E-6	2.08E-5	9.01E-7	-4.44E-4	7.16E-5
NHWD	kg	4.83E+0	9.13E-1	1.31E-1	5.88E+0	1.03E-1	4.23E-1	3.30E+0	-1.36E+0	8.35E+0
RWD	kg	1.22E-3	9.65E-5	1.15E-5	1.32E-3	1.13E-5	4.11E-5	4.90E-6	-5.14E-4	8.67E-4
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



Ecochain Technologies BV
H.J.E. Wenckebachweg 123, 1096 AM Amsterdam, The Netherlands
<https://www.ecochain.com>
+31 20 3035 777