

Environmental Profile

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

Ecochain v3.5.80



Product: 4062798 - PEXc/EVOH Pipe RD 20x2.0 L=300
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]; **PENRE** = 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	8.02E+1	4.29E+0	8.61E+0	9.31E+1	3.81E-1	7.34E+1	1.67E+0	-4.22E+1	1.26E+2
GWP-f	kg CO2 eq	8.25E+1	4.28E+0	7.83E+0	9.46E+1	3.81E-1	6.91E+1	1.67E+0	-4.47E+1	1.21E+2
GWP-b	kg CO2 eq	-2.27E+0	1.81E-3	7.74E-1	-1.50E+0	2.31E-4	4.30E+0	1.27E-3	2.56E+0	5.36E+0
GWP-luluc	kg CO2 eq	5.39E-2	1.64E-3	7.17E-3	6.28E-2	1.35E-4	2.28E-4	2.45E-5	-2.07E-2	4.24E-2
ODP	kg CFC11 eq	3.10E-6	9.41E-7	4.45E-7	4.48E-6	8.78E-8	1.04E-7	3.60E-8	-4.71E-6	-1.04E-9
AP	mol H+ eq	3.06E-1	3.12E-2	7.04E-2	4.07E-1	2.17E-3	9.42E-3	8.62E-4	-4.54E-2	3.74E-1
EP-fw	kg P eq	2.42E-3	4.17E-5	3.99E-4	2.86E-3	3.13E-6	1.10E-5	1.13E-6	-2.93E-4	2.59E-3
EP-m	kg N eq	5.72E-2	1.02E-2	7.93E-3	7.53E-2	7.76E-4	4.15E-3	6.48E-4	-1.36E-2	6.73E-2
EP-T	mol N eq	6.49E-1	1.13E-1	9.18E-2	8.53E-1	8.56E-3	4.70E-2	3.50E-3	-1.52E-1	7.60E-1
POCP	kg NMVOC eq	2.73E-1	3.16E-2	3.09E-2	3.35E-1	2.45E-3	1.27E-2	1.37E-3	-4.74E-2	3.04E-1
ADP-mm	kg Sb eq	9.70E-4	1.04E-4	9.21E-4	1.99E-3	9.85E-6	8.57E-6	8.67E-7	-3.51E-5	1.98E-3
ADP-f	MJ	2.63E+3	6.41E+1	6.99E+1	2.76E+3	5.85E+0	5.95E+0	2.63E+0	-7.46E+2	2.03E+3
WDP	m3 depriv.	5.76E+1	2.22E-1	2.57E+0	6.04E+1	1.79E-2	1.57E-1	1.30E-2	-5.27E+0	5.53E+1
PM	disease inc.	2.69E-6	3.71E-7	4.55E-7	3.52E-6	3.44E-8	8.36E-8	1.81E-8	-3.98E-7	3.25E-6
IR	kBq U-235 eq	2.22E+0	2.69E-1	6.00E-2	2.55E+0	2.56E-2	2.15E-2	1.23E-2	-3.71E-1	2.24E+0
ETP-fw	CTUe	8.60E+2	5.63E+1	5.75E+2	1.49E+3	4.75E+0	2.67E+1	2.45E+0	-2.61E+2	1.26E+3
HTP-c	CTUh	2.51E-8	1.89E-9	2.94E-8	5.64E-8	1.69E-10	9.40E-9	6.48E-11	-5.51E-9	6.06E-8
HTP-nc	CTUh	5.91E-7	6.10E-8	7.43E-7	1.39E-6	5.66E-9	7.24E-8	1.51E-9	-9.92E-8	1.37E-6
SQP	Pt	5.11E+2	5.33E+1	1.07E+2	6.71E+2	5.00E+0	2.81E+0	6.75E+0	-7.02E+2	-1.64E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.13E+2	1.96E-2	1.12E+3	1.23E+3	8.39E-2	2.79E-1	1.04E-1	-1.18E+2	1.11E+3
PERM	MJ	0	7.64E-1	0	7.64E-1	0	0	0	0	7.64E-1
PERT	MJ	1.13E+2	7.84E-1	1.12E+3	1.23E+3	8.39E-2	2.79E-1	1.04E-1	-1.18E+2	1.12E+3
PENRE	MJ	2.82E+3	3.23E+0	7.46E+1	2.90E+3	6.21E+0	6.35E+0	2.79E+0	-8.26E+2	2.09E+3
PENRM	MJ	0	6.48E+1	0	6.48E+1	0	0	0	0	6.48E+1
PENRT	MJ	2.82E+3	6.80E+1	7.46E+1	2.97E+3	6.21E+0	6.35E+0	2.79E+0	-8.26E+2	2.16E+3
PET	MJ	2.94E+3	6.88E+1	1.19E+3	4.20E+3	6.29E+0	6.63E+0	2.90E+0	-9.44E+2	3.27E+3
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	9.72E-1	7.58E-3	7.18E-2	1.05E+0	6.62E-4	1.41E-2	3.25E-3	-1.40E-1	9.30E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	5.38E-4	1.57E-4	1.20E-5	7.07E-4	1.50E-5	2.65E-5	3.17E-6	-9.15E-4	-1.62E-4
NHWD	kg	5.95E+0	3.88E+0	2.43E-1	1.01E+1	3.62E-1	4.84E-1	1.16E+1	-5.93E-1	2.19E+1
RWD	kg	2.23E-3	4.22E-4	1.76E-5	2.67E-3	3.98E-5	2.73E-5	1.72E-5	-4.46E-4	2.31E-3
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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