

Environmental Profile

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

Ecochain v3.5.80



Product: 3065593 - PEXc/EVOH Pipe IV 28x4.0 L=100
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]

Statement of Confidentiality

This document and supporting material contain confidential and proprietary business information of Wavin - PL - MPC. These materials may be printed or (photo) copied or otherwise used only with the written consent of Wavin - PL - MPC.

Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	5.71E+1	3.70E+0	9.88E+0	7.07E+1	3.28E-1	7.29E+1	1.44E+0	-3.82E+1	1.07E+2
GWP-f	kg CO2 eq	6.88E+1	3.70E+0	9.15E+0	8.17E+1	3.28E-1	6.00E+1	1.44E+0	-3.96E+1	1.04E+2
GWP-b	kg CO2 eq	-1.17E+1	1.62E-3	7.22E-1	-1.10E+1	1.99E-4	1.29E+1	1.09E-3	1.46E+0	3.32E+0
GWP-luluc	kg CO2 eq	3.98E-2	1.39E-3	8.56E-3	4.97E-2	1.16E-4	1.92E-4	2.11E-5	-1.72E-2	3.29E-2
ODP	kg CFC11 eq	2.66E-6	8.14E-7	5.20E-7	3.99E-6	7.56E-8	8.57E-8	3.10E-8	-4.19E-6	6.76E-10
AP	mol H+ eq	2.61E-1	2.45E-2	8.41E-2	3.70E-1	1.87E-3	8.10E-3	7.42E-4	-4.42E-2	3.36E-1
EP-fw	kg P eq	1.60E-3	3.66E-5	4.75E-4	2.11E-3	2.70E-6	9.10E-6	9.70E-7	-2.48E-4	1.87E-3
EP-m	kg N eq	4.96E-2	8.25E-3	9.35E-3	6.72E-2	6.68E-4	3.58E-3	5.41E-4	-1.33E-2	5.87E-2
EP-T	mol N eq	5.57E-1	9.11E-2	1.09E-1	7.57E-1	7.36E-3	4.05E-2	3.01E-3	-1.49E-1	6.59E-1
POCP	kg NMVOC eq	2.42E-1	2.57E-2	3.67E-2	3.05E-1	2.11E-3	1.09E-2	1.18E-3	-4.85E-2	2.70E-1
ADP-mm	kg Sb eq	8.33E-4	9.16E-5	1.10E-3	2.03E-3	8.48E-6	6.87E-6	7.46E-7	-4.71E-5	2.00E-3
ADP-f	MJ	2.25E+3	5.55E+1	8.23E+1	2.39E+3	5.03E+0	5.16E+0	2.27E+0	-6.62E+2	1.74E+3
WDP	m3 depriv.	4.99E+1	1.95E-1	3.05E+0	5.31E+1	1.54E-2	1.26E-1	1.13E-2	-3.84E+0	4.94E+1
PM	disease inc.	2.45E-6	3.25E-7	5.38E-7	3.32E-6	2.96E-8	7.16E-8	1.56E-8	-4.43E-7	2.99E-6
IR	kBq U-235 eq	1.83E+0	2.33E-1	6.89E-2	2.13E+0	2.20E-2	1.89E-2	1.06E-2	-3.36E-1	1.85E+0
ETP-fw	CTUe	6.50E+2	4.91E+1	6.87E+2	1.39E+3	4.09E+0	2.04E+1	2.05E+0	-2.06E+2	1.21E+3
HTP-c	CTUh	2.53E-8	1.62E-9	3.51E-8	6.21E-8	1.45E-10	8.22E-9	5.58E-11	-7.74E-9	6.28E-8
HTP-nc	CTUh	5.04E-7	5.34E-8	8.88E-7	1.45E-6	4.87E-9	6.22E-8	1.29E-9	-9.97E-8	1.41E-6
SQP	Pt	1.20E+3	4.71E+1	1.28E+2	1.37E+3	4.31E+0	2.64E+0	5.81E+0	-1.14E+3	2.48E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.01E+2	9.49E-3	1.34E+3	1.54E+3	7.22E-2	2.35E-1	8.95E-2	-1.78E+2	1.37E+3
PERM	MJ	0	6.76E-1	0	6.76E-1	0	0	0	0	6.76E-1
PERT	MJ	2.01E+2	6.86E-1	1.34E+3	1.55E+3	7.22E-2	2.35E-1	8.95E-2	-1.78E+2	1.37E+3
PENRE	MJ	2.42E+3	1.56E+0	8.77E+1	2.50E+3	5.34E+0	5.51E+0	2.40E+0	-7.33E+2	1.79E+3
PENRM	MJ	0	5.74E+1	0	5.74E+1	0	0	0	0	5.74E+1
PENRT	MJ	2.42E+3	5.89E+1	8.77E+1	2.56E+3	5.34E+0	5.51E+0	2.40E+0	-7.33E+2	1.84E+3
PET	MJ	2.62E+3	5.96E+1	1.43E+3	4.11E+3	5.42E+0	5.74E+0	2.49E+0	-9.10E+2	3.21E+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	8.13E-1	6.65E-3	8.53E-2	9.05E-1	5.70E-4	1.21E-2	2.80E-3	-1.04E-1	8.17E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	5.05E-4	1.38E-4	1.15E-5	6.55E-4	1.29E-5	2.27E-5	2.73E-6	-8.36E-4	-1.43E-4
NHWD	kg	5.44E+0	3.43E+0	2.45E-1	9.12E+0	3.12E-1	4.47E-1	9.97E+0	-8.23E-1	1.90E+1
RWD	kg	1.82E-3	3.65E-4	1.68E-5	2.20E-3	3.42E-5	2.42E-5	1.48E-5	-4.15E-4	1.86E-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



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