

Environmental Profile

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

Ecochain v3.5.80



Product: 3061229 - PEXc/EVOH Pipe Ins13GY 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	1.26E+1	8.42E-1	1.02E+0	1.44E+1	1.04E-1	3.66E+1	4.59E-1	-1.35E+1	3.81E+1
GWP-f	kg CO2 eq	2.89E+1	8.42E-1	6.12E-1	3.04E+1	1.04E-1	1.96E+1	4.60E-1	-1.51E+1	3.55E+1
GWP-b	kg CO2 eq	-1.64E+1	3.72E-4	4.04E-1	-1.60E+1	6.32E-5	1.70E+1	3.46E-4	1.62E+0	2.63E+0
GWP-luluc	kg CO2 eq	2.97E-2	3.15E-4	2.28E-4	3.03E-2	3.68E-5	1.24E-4	6.66E-6	-1.94E-2	1.10E-2
ODP	kg CFC11 eq	1.65E-6	1.85E-7	3.59E-8	1.87E-6	2.40E-8	5.72E-8	9.84E-9	-1.64E-6	3.22E-7
AP	mol H+ eq	1.26E-1	5.50E-3	2.04E-3	1.34E-1	5.93E-4	3.69E-3	2.35E-4	-3.06E-2	1.08E-1
EP-fw	kg P eq	8.26E-4	8.35E-6	1.44E-5	8.49E-4	8.56E-7	5.19E-6	3.06E-7	-2.57E-4	5.98E-4
EP-m	kg N eq	2.59E-2	1.86E-3	4.71E-4	2.83E-2	2.12E-4	1.56E-3	1.70E-4	-8.52E-3	2.17E-2
EP-T	mol N eq	2.89E-1	2.05E-2	4.17E-3	3.13E-1	2.34E-3	1.76E-2	9.54E-4	-9.78E-2	2.36E-1
POCP	kg NMVOC eq	1.11E-1	5.80E-3	1.33E-3	1.18E-1	6.68E-4	4.82E-3	3.73E-4	-3.19E-2	9.22E-2
ADP-mm	kg Sb eq	3.96E-4	2.09E-5	1.87E-5	4.36E-4	2.69E-6	6.11E-6	2.36E-7	-5.10E-5	3.94E-4
ADP-f	MJ	8.20E+2	1.26E+1	4.38E+0	8.37E+2	1.60E+0	3.74E+0	7.19E-1	-2.54E+2	5.89E+2
WDP	m3 depriv.	1.71E+1	4.46E-2	1.11E-1	1.72E+1	4.90E-3	5.48E-2	3.44E-3	-3.34E+0	1.39E+1
PM	disease inc.	1.40E-6	7.42E-8	2.28E-8	1.50E-6	9.39E-9	3.82E-8	4.94E-9	-4.73E-7	1.08E-6
IR	kBq U-235 eq	8.96E-1	5.30E-2	6.88E-3	9.56E-1	6.98E-3	1.55E-2	3.35E-3	-2.59E-1	7.22E-1
ETP-fw	CTUe	5.03E+2	1.12E+1	1.60E+1	5.31E+2	1.30E+0	9.32E+0	6.46E-1	-2.01E+2	3.40E+2
HTP-c	CTUh	1.58E-8	3.70E-10	8.52E-10	1.70E-8	4.62E-11	2.92E-9	1.76E-11	-7.60E-9	1.24E-8
HTP-nc	CTUh	2.66E-7	1.22E-8	1.96E-8	2.97E-7	1.55E-9	2.31E-8	4.06E-10	-9.22E-8	2.30E-7
SQP	Pt	1.51E+3	1.07E+1	3.21E+0	1.52E+3	1.37E+0	2.24E+0	1.84E+0	-1.44E+3	8.66E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.30E+2	1.91E-3	2.03E+1	2.50E+2	2.29E-2	1.38E-1	2.84E-2	-2.25E+2	2.56E+1
PERM	MJ	0	1.55E-1	0	1.55E-1	0	0	0	0	1.55E-1
PERT	MJ	2.30E+2	1.56E-1	2.03E+1	2.50E+2	2.29E-2	1.38E-1	2.84E-2	-2.25E+2	2.58E+1
PENRE	MJ	8.79E+2	3.14E-1	4.72E+0	8.84E+2	1.70E+0	3.98E+0	7.63E-1	-2.79E+2	6.11E+2
PENRM	MJ	0	1.31E+1	0	1.31E+1	0	0	0	0	1.31E+1
PENRT	MJ	8.79E+2	1.34E+1	4.72E+0	8.97E+2	1.70E+0	3.98E+0	7.63E-1	-2.79E+2	6.24E+2
PET	MJ	1.11E+3	1.36E+1	2.50E+1	1.15E+3	1.72E+0	4.12E+0	7.91E-1	-5.04E+2	6.50E+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	3.41E-1	1.52E-3	3.06E-3	3.45E-1	1.81E-4	4.77E-3	8.88E-4	-9.07E-2	2.60E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	3.15E-4	3.15E-5	5.77E-6	3.52E-4	4.09E-6	1.25E-5	8.64E-7	-3.53E-4	1.70E-5
NHWD	kg	3.49E+0	7.84E-1	9.41E-2	4.37E+0	9.90E-2	2.61E-1	3.17E+0	-8.37E-1	7.06E+0
RWD	kg	9.44E-4	8.31E-5	8.44E-6	1.04E-3	1.09E-5	2.13E-5	4.70E-6	-2.96E-4	7.76E-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



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