

Environmental Profile

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

Ecochain v3.5.80



Product: 3019571 - Sanitherm PEXc/Al/PE Pipe WT 16x2.0L=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]

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Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	8.85E+1	8.59E-1	1.39E+0	9.08E+1	1.34E-1	1.50E+1	3.66E-1	1.86E+1	1.25E+2
GWP-f	kg CO2 eq	8.92E+1	8.58E-1	1.12E+0	9.12E+1	1.34E-1	1.40E+1	3.62E-1	1.87E+1	1.24E+2
GWP-b	kg CO2 eq	-9.48E-1	3.83E-4	2.69E-1	-6.78E-1	8.12E-5	1.02E+0	4.24E-3	-1.21E-1	2.21E-1
GWP-luluc	kg CO2 eq	2.69E-1	3.20E-4	8.77E-4	2.71E-1	4.74E-5	4.78E-5	1.47E-5	1.06E-1	3.77E-1
ODP	kg CFC11 eq	3.60E-6	1.89E-7	6.44E-8	3.86E-6	3.08E-8	2.27E-8	1.42E-8	8.00E-8	4.00E-6
AP	mol H+ eq	5.40E-1	5.43E-3	8.51E-3	5.54E-1	7.62E-4	1.91E-3	3.67E-4	1.73E-1	7.31E-1
EP-fw	kg P eq	3.10E-3	8.56E-6	4.96E-5	3.16E-3	1.10E-6	2.49E-6	6.79E-7	8.81E-4	4.04E-3
EP-m	kg N eq	8.25E-2	1.85E-3	1.07E-3	8.54E-2	2.73E-4	8.27E-4	2.00E-4	2.46E-2	1.11E-1
EP-T	mol N eq	9.26E-1	2.05E-2	1.18E-2	9.58E-1	3.01E-3	9.37E-3	1.48E-3	2.73E-1	1.24E+0
POCP	kg NMVOC eq	2.91E-1	5.80E-3	3.94E-3	3.01E-1	8.59E-4	2.54E-3	4.96E-4	7.96E-2	3.84E-1
ADP-mm	kg Sb eq	4.70E-4	2.14E-5	1.08E-4	5.99E-4	3.46E-6	1.47E-6	3.64E-7	-6.23E-3	-5.62E-3
ADP-f	MJ	1.23E+3	1.29E+1	9.54E+0	1.26E+3	2.05E+0	1.43E+0	1.10E+0	1.11E+2	1.37E+3
WDP	m3 depriv.	2.28E+1	4.57E-2	3.28E-1	2.32E+1	6.30E-3	-1.58E-2	5.83E-3	1.89E+0	2.51E+1
PM	disease inc.	5.96E-6	7.61E-8	5.94E-8	6.09E-6	1.21E-8	2.23E-8	6.98E-9	2.12E-6	8.26E-6
IR	kBq U-235 eq	1.62E+0	5.41E-2	9.62E-3	1.68E+0	8.98E-3	4.86E-3	6.31E-3	3.02E-1	2.01E+0
ETP-fw	CTUe	2.06E+3	1.15E+1	6.93E+1	2.14E+3	1.67E+0	6.35E+0	1.07E+3	6.38E+2	3.85E+3
HTP-c	CTUh	1.05E-7	3.77E-10	3.56E-9	1.09E-7	5.93E-11	2.07E-9	6.08E-11	3.75E-8	1.49E-7
HTP-nc	CTUh	1.98E-6	1.25E-8	8.89E-8	2.08E-6	1.99E-9	1.54E-8	1.25E-9	6.35E-7	2.73E-6
SQP	Pt	2.56E+2	1.10E+1	1.30E+1	2.80E+2	1.76E+0	1.23E+0	2.46E+0	-3.74E+1	2.48E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.12E+2	1.45E-3	1.30E+2	2.42E+2	2.95E-2	5.72E-2	1.01E-1	2.22E+1	2.64E+2
PERM	MJ	0	1.59E-1	0	1.59E-1	0	0	0	0	1.59E-1
PERT	MJ	1.12E+2	1.60E-1	1.30E+2	2.42E+2	2.95E-2	5.72E-2	1.01E-1	2.22E+1	2.65E+2
PENRE	MJ	1.32E+3	2.29E-1	1.02E+1	1.33E+3	2.18E+0	1.53E+0	1.17E+0	1.11E+2	1.44E+3
PENRM	MJ	0	1.35E+1	0	1.35E+1	0	0	0	0	1.35E+1
PENRT	MJ	1.32E+3	1.37E+1	1.02E+1	1.34E+3	2.18E+0	1.53E+0	1.17E+0	1.11E+2	1.46E+3
PET	MJ	1.43E+3	1.39E+1	1.40E+2	1.58E+3	2.21E+0	1.59E+0	1.27E+0	1.33E+2	1.72E+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	7.09E-1	1.56E-3	9.14E-3	7.19E-1	2.32E-4	1.70E-3	1.41E-3	1.45E-1	8.68E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	3.15E-2	3.24E-5	3.94E-6	3.16E-2	5.25E-6	5.78E-6	1.31E-6	-1.27E-2	1.88E-2
NHWD	kg	1.51E+1	8.06E-1	6.94E-2	1.60E+1	1.27E-1	1.17E-1	4.09E+0	5.13E+0	2.55E+1
RWD	kg	1.74E-3	8.48E-5	5.77E-6	1.83E-3	1.40E-5	6.43E-6	7.47E-6	3.40E-4	2.20E-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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