

Environmental Profile

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

Ecochain v3.5.80



Product: 3019575 - Sanitherm PEXc/Al/PE Pipe WT 20x2.5L=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	1.15E+2	1.37E+0	2.47E+0	1.19E+2	1.96E-1	2.46E+1	5.84E-1	1.97E+1	1.64E+2
GWP-f	kg CO2 eq	1.16E+2	1.37E+0	2.08E+0	1.20E+2	1.95E-1	2.28E+1	5.79E-1	1.97E+1	1.63E+2
GWP-b	kg CO2 eq	-1.65E+0	6.16E-4	3.92E-1	-1.26E+0	1.19E-4	1.72E+0	5.36E-3	-1.46E-1	3.19E-1
GWP-luluc	kg CO2 eq	3.35E-1	5.09E-4	1.72E-3	3.38E-1	6.92E-5	7.14E-5	2.01E-5	1.31E-1	4.69E-1
ODP	kg CFC11 eq	4.66E-6	3.02E-7	1.19E-7	5.08E-6	4.50E-8	3.34E-8	2.04E-8	-2.63E-7	4.92E-6
AP	mol H+ eq	6.92E-1	8.51E-3	1.68E-2	7.17E-1	1.11E-3	3.02E-3	5.22E-4	2.12E-1	9.34E-1
EP-fw	kg P eq	3.87E-3	1.37E-5	9.68E-5	3.98E-3	1.61E-6	3.71E-6	9.30E-7	1.09E-3	5.08E-3
EP-m	kg N eq	1.06E-1	2.92E-3	2.02E-3	1.11E-1	3.98E-4	1.32E-3	2.95E-4	2.96E-2	1.43E-1
EP-T	mol N eq	1.19E+0	3.23E-2	2.27E-2	1.25E+0	4.39E-3	1.49E-2	2.11E-3	3.29E-1	1.60E+0
POCP	kg NMVOC eq	3.81E-1	9.16E-3	7.61E-3	3.98E-1	1.25E-3	4.04E-3	7.21E-4	9.55E-2	4.99E-1
ADP-mm	kg Sb eq	6.51E-4	3.43E-5	2.15E-4	9.01E-4	5.05E-6	2.13E-6	5.19E-7	-7.73E-3	-6.82E-3
ADP-f	MJ	1.72E+3	2.06E+1	1.80E+1	1.76E+3	3.00E+0	2.09E+0	1.57E+0	8.02E+1	1.85E+3
WDP	m3 depriv.	3.29E+1	7.31E-2	6.33E-1	3.36E+1	9.20E-3	-1.00E-2	8.35E-3	2.20E+0	3.58E+1
PM	disease inc.	7.59E-6	1.22E-7	1.14E-7	7.82E-6	1.76E-8	3.30E-8	1.01E-8	2.62E-6	1.05E-5
IR	kBq U-235 eq	2.14E+0	8.64E-2	1.71E-2	2.24E+0	1.31E-2	7.03E-3	8.78E-3	3.57E-1	2.63E+0
ETP-fw	CTUe	2.59E+3	1.83E+1	1.37E+2	2.74E+3	2.44E+0	9.32E+0	1.33E+3	7.86E+2	4.87E+3
HTP-c	CTUh	1.32E-7	6.00E-10	7.02E-9	1.40E-7	8.67E-11	3.34E-9	8.06E-11	4.61E-8	1.90E-7
HTP-nc	CTUh	2.49E-6	2.00E-8	1.76E-7	2.69E-6	2.90E-9	2.47E-8	1.67E-9	7.84E-7	3.50E-6
SQP	Pt	3.65E+2	1.77E+1	2.56E+1	4.08E+2	2.57E+0	1.68E+0	3.57E+0	-8.08E+1	3.35E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.47E+2	1.83E-3	2.61E+2	4.08E+2	4.30E-2	8.68E-2	1.33E-1	2.25E+1	4.31E+2
PERM	MJ	0	2.55E-1	0	2.55E-1	0	0	0	0	2.55E-1
PERT	MJ	1.47E+2	2.56E-1	2.61E+2	4.08E+2	4.30E-2	8.68E-2	1.33E-1	2.25E+1	4.31E+2
PENRE	MJ	1.84E+3	2.88E-1	1.92E+1	1.86E+3	3.18E+0	2.24E+0	1.67E+0	7.39E+1	1.94E+3
PENRM	MJ	0	2.16E+1	0	2.16E+1	0	0	0	0	2.16E+1
PENRT	MJ	1.84E+3	2.19E+1	1.92E+1	1.88E+3	3.18E+0	2.24E+0	1.67E+0	7.39E+1	1.96E+3
PET	MJ	1.99E+3	2.21E+1	2.80E+2	2.29E+3	3.23E+0	2.32E+0	1.80E+0	9.64E+1	2.39E+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	9.48E-1	2.49E-3	1.77E-2	9.68E-1	3.39E-4	3.13E-3	2.00E-3	1.77E-1	1.15E+0

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	3.92E-2	5.18E-5	5.82E-6	3.92E-2	7.67E-6	8.88E-6	1.87E-6	-1.59E-2	2.34E-2
NHWD	kg	1.92E+1	1.29E+0	1.05E-1	2.06E+1	1.86E-1	1.84E-1	5.97E+0	6.33E+0	3.32E+1
RWD	kg	2.28E-3	1.35E-4	8.50E-6	2.42E-3	2.04E-5	9.17E-6	1.06E-5	3.97E-4	2.86E-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