

Environmental Profile

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

Ecochain v3.5.80



Product: 3059362 - PERT/EVOH Pipe IV 20x2.0 L=240 Soft
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	5.01E+1	1.89E+0	1.99E+0	5.39E+1	2.90E-1	5.87E+1	1.28E+0	-3.39E+1	8.04E+1
GWP-f	kg CO2 eq	5.55E+1	1.89E+0	1.36E+0	5.87E+1	2.90E-1	5.30E+1	1.28E+0	-3.39E+1	7.94E+1
GWP-b	kg CO2 eq	-5.42E+0	7.47E-4	6.33E-1	-4.78E+0	1.76E-4	5.68E+0	9.66E-4	4.32E-2	9.42E-1
GWP-luluc	kg CO2 eq	2.62E-2	7.44E-4	7.63E-4	2.77E-2	1.03E-4	1.33E-4	1.85E-5	-4.09E-3	2.39E-2
ODP	kg CFC11 eq	1.57E-6	4.14E-7	7.90E-8	2.06E-6	6.68E-8	5.64E-8	2.74E-8	-3.55E-6	-1.34E-6
AP	mol H+ eq	2.05E-1	1.57E-2	7.20E-3	2.28E-1	1.65E-3	6.46E-3	6.55E-4	-2.89E-2	2.08E-1
EP-fw	kg P eq	1.00E-3	1.80E-5	4.49E-5	1.07E-3	2.39E-6	6.64E-6	8.52E-7	-7.95E-5	9.97E-4
EP-m	kg N eq	3.58E-2	4.93E-3	1.16E-3	4.19E-2	5.91E-4	2.90E-3	4.90E-4	-9.20E-3	3.67E-2
EP-T	mol N eq	4.02E-1	5.45E-2	1.16E-2	4.68E-1	6.51E-3	3.30E-2	2.66E-3	-1.02E-1	4.08E-1
POCP	kg NMVOC eq	1.89E-1	1.51E-2	3.79E-3	2.08E-1	1.86E-3	8.79E-3	1.04E-3	-3.40E-2	1.86E-1
ADP-mm	kg Sb eq	6.40E-4	4.47E-5	8.27E-5	7.68E-4	7.50E-6	3.04E-6	6.57E-7	-2.18E-5	7.57E-4
ADP-f	MJ	1.91E+3	2.81E+1	1.06E+1	1.95E+3	4.45E+0	3.11E+0	2.00E+0	-5.66E+2	1.39E+3
WDP	m3 depriv.	4.36E+1	9.57E-2	3.16E-1	4.40E+1	1.37E-2	1.08E-1	9.26E-3	-1.43E+0	4.27E+1
PM	disease inc.	1.77E-6	1.59E-7	6.05E-8	1.99E-6	2.62E-8	5.23E-8	1.38E-8	-1.83E-7	1.90E-6
IR	kBq U-235 eq	1.31E+0	1.18E-1	1.36E-2	1.44E+0	1.95E-2	1.02E-2	9.34E-3	-1.88E-1	1.29E+0
ETP-fw	CTUe	3.67E+2	2.45E+1	5.79E+1	4.50E+2	3.61E+0	1.68E+1	1.85E+0	-6.81E+1	4.04E+2
HTP-c	CTUh	1.78E-8	8.44E-10	3.01E-9	2.16E-8	1.29E-10	6.65E-9	4.88E-11	-4.29E-9	2.42E-8
HTP-nc	CTUh	3.72E-7	2.64E-8	7.32E-8	4.71E-7	4.31E-9	5.20E-8	1.14E-9	-4.82E-8	4.80E-7
SQP	Pt	5.49E+2	2.28E+1	1.11E+1	5.82E+2	3.81E+0	1.43E+0	5.14E+0	-4.21E+2	1.72E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.01E+2	1.46E-2	9.69E+1	1.98E+2	6.38E-2	1.70E-1	7.97E-2	-6.23E+1	1.36E+2
PERM	MJ	0	3.24E-1	0	3.24E-1	0	0	0	0	3.24E-1
PERT	MJ	1.01E+2	3.39E-1	9.69E+1	1.99E+2	6.38E-2	1.70E-1	7.97E-2	-6.23E+1	1.37E+2
PENRE	MJ	2.05E+3	2.39E+0	1.13E+1	2.07E+3	4.72E+0	3.33E+0	2.12E+0	-6.27E+2	1.45E+3
PENRM	MJ	0	2.75E+1	0	2.75E+1	0	0	0	0	2.75E+1
PENRT	MJ	2.05E+3	2.99E+1	1.13E+1	2.09E+3	4.72E+0	3.33E+0	2.12E+0	-6.27E+2	1.48E+3
PET	MJ	2.15E+3	3.02E+1	1.08E+2	2.29E+3	4.79E+0	3.50E+0	2.20E+0	-6.90E+2	1.61E+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	6.98E-1	3.26E-3	8.76E-3	7.10E-1	5.04E-4	1.03E-2	2.48E-3	-3.93E-2	6.84E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	3.03E-4	6.76E-5	9.09E-6	3.80E-4	1.14E-5	1.60E-5	2.40E-6	-7.00E-4	-2.90E-4
NHWD	kg	2.36E+0	1.65E+0	1.51E-1	4.16E+0	2.76E-1	3.29E-1	8.82E+0	-4.31E-1	1.32E+1
RWD	kg	1.19E-3	1.86E-4	1.33E-5	1.39E-3	3.03E-5	1.18E-5	1.31E-5	-2.56E-4	1.19E-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