

Environmental Profile

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

Ecochain v3.5.80



Product: 4040998 - PERT/EVOH/PERT Pipe BK 10x1.3 L=1000
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	7.31E+1	2.66E+0	3.04E+0	7.88E+1	4.07E-1	7.81E+1	1.78E+0	-4.59E+1	1.13E+2
GWP-f	kg CO2 eq	7.72E+1	2.65E+0	2.19E+0	8.20E+1	4.06E-1	7.36E+1	1.78E+0	-4.59E+1	1.12E+2
GWP-b	kg CO2 eq	-4.13E+0	9.67E-4	8.48E-1	-3.28E+0	2.47E-4	4.47E+0	1.35E-3	3.48E-2	1.22E+0
GWP-luluc	kg CO2 eq	4.96E-2	1.08E-3	1.40E-3	5.21E-2	1.44E-4	1.83E-4	2.68E-5	-3.86E-3	4.85E-2
ODP	kg CFC11 eq	2.95E-6	5.79E-7	1.27E-7	3.66E-6	9.36E-8	7.77E-8	3.85E-8	-4.80E-6	-9.33E-7
AP	mol H+ eq	2.88E-1	2.49E-2	1.34E-2	3.27E-1	2.31E-3	8.85E-3	9.24E-4	-3.65E-2	3.02E-1
EP-fw	kg P eq	1.38E-3	2.46E-5	8.10E-5	1.49E-3	3.34E-6	9.23E-6	1.22E-6	-8.61E-5	1.41E-3
EP-m	kg N eq	4.97E-2	7.57E-3	1.95E-3	5.92E-2	8.28E-4	3.98E-3	6.91E-4	-1.18E-2	5.29E-2
EP-T	mol N eq	5.58E-1	8.38E-2	2.02E-2	6.62E-1	9.13E-3	4.52E-2	3.74E-3	-1.30E-1	5.90E-1
POCP	kg NMVOC eq	2.61E-1	2.30E-2	6.67E-3	2.91E-1	2.61E-3	1.20E-2	1.46E-3	-4.30E-2	2.64E-1
ADP-mm	kg Sb eq	8.87E-4	6.07E-5	1.60E-4	1.11E-3	1.05E-5	3.94E-6	9.33E-7	-2.21E-5	1.10E-3
ADP-f	MJ	2.66E+3	3.92E+1	1.76E+1	2.72E+3	6.24E+0	4.15E+0	2.81E+0	-7.67E+2	1.97E+3
WDP	m3 depriv.	5.99E+1	1.30E-1	5.56E-1	6.06E+1	1.91E-2	1.45E-1	1.61E-2	-1.80E+0	5.90E+1
PM	disease inc.	2.58E-6	2.17E-7	1.04E-7	2.90E-6	3.67E-8	7.07E-8	1.93E-8	-1.89E-7	2.84E-6
IR	kBq U-235 eq	1.97E+0	1.65E-1	2.08E-2	2.15E+0	2.73E-2	1.31E-2	1.31E-2	-2.35E-1	1.97E+0
ETP-fw	CTUe	5.38E+2	3.38E+1	1.08E+2	6.80E+2	5.06E+0	2.45E+1	2.63E+0	-7.86E+1	6.33E+2
HTP-c	CTUh	2.43E-8	1.20E-9	5.59E-9	3.11E-8	1.80E-10	1.10E-8	7.10E-11	-4.67E-9	3.77E-8
HTP-nc	CTUh	5.17E-7	3.61E-8	1.38E-7	6.90E-7	6.04E-9	7.69E-8	1.62E-9	-5.56E-8	7.19E-7
SQP	Pt	4.83E+2	3.07E+1	2.05E+1	5.34E+2	5.34E+0	1.79E+0	7.20E+0	-3.40E+2	2.08E+2
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	9.86E+1	2.96E-2	1.90E+2	2.89E+2	8.95E-2	2.34E-1	1.10E-1	-4.99E+1	2.40E+2
PERM	MJ	0	4.34E-1	0	4.34E-1	0	0	0	0	4.34E-1
PERT	MJ	9.86E+1	4.63E-1	1.90E+2	2.89E+2	8.95E-2	2.34E-1	1.10E-1	-4.99E+1	2.40E+2
PENRE	MJ	2.86E+3	4.83E+0	1.89E+1	2.88E+3	6.62E+0	4.45E+0	2.99E+0	-8.50E+2	2.05E+3
PENRM	MJ	0	3.68E+1	0	3.68E+1	0	0	0	0	3.68E+1
PENRT	MJ	2.86E+3	4.16E+1	1.89E+1	2.92E+3	6.62E+0	4.45E+0	2.99E+0	-8.50E+2	2.08E+3
PET	MJ	2.96E+3	4.21E+1	2.09E+2	3.21E+3	6.71E+0	4.68E+0	3.10E+0	-9.00E+2	2.32E+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	9.82E-1	4.45E-3	1.54E-2	1.00E+0	7.06E-4	1.42E-2	3.46E-3	-4.91E-2	9.71E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	4.14E-4	9.19E-5	1.22E-5	5.18E-4	1.59E-5	2.34E-5	3.40E-6	-9.39E-4	-3.78E-4
NHWD	kg	3.23E+0	2.21E+0	2.06E-1	5.64E+0	3.87E-1	4.54E-1	1.24E+1	-4.60E-1	1.84E+1
RWD	kg	1.94E-3	2.59E-4	1.79E-5	2.22E-3	4.24E-5	1.48E-5	1.84E-5	-3.24E-4	1.97E-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