

Environmental Profile

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

Ecochain v3.5.64



Product: 3003657 - PE Tee 88,5° BK 90x50 PN4
Unit: 1 piece
Manufacturer: Wavin - IT - SM Maddalena

LCA standard: EN15804+A2 (2019)
Standard database: Worldwide - Ecoinvent v 3.6 Cut-Off
Externally verified: Yes
Issue date: 24-11-2022
End of validity: 24-11-2027
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 - IT - SM Maddalena (2020). (☑ = 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 Climate Change [kg CO2 eq]; **GWP-f** = EF Climate change - Fossil [kg CO2 eq]; **GWP-b** = EF Climate Change - Biogenic [kg CO2 eq]; **GWP-luluc** = EF 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 - IT - SM Maddalena. These materials may be printed or (photo) copied or otherwise used only with the written consent of Wavin - IT - SM Maddalena.

Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	3.90E-1	5.14E-2	3.02E-2	4.71E-1	5.30E-3	2.49E-1	2.93E-3	-2.57E-1	4.72E-1
GWP-f	kg CO2 eq	4.46E-1	5.14E-2	2.58E-2	5.23E-1	5.29E-3	1.75E-1	2.93E-3	-2.91E-1	4.15E-1
GWP-b	kg CO2 eq	-5.63E-2	2.91E-5	2.18E-3	-5.41E-2	3.21E-6	7.42E-2	2.20E-6	3.46E-2	5.47E-2
GWP-luluc	kg CO2 eq	3.53E-4	1.89E-5	2.18E-3	2.55E-3	1.87E-6	3.08E-5	4.21E-8	-3.36E-4	2.25E-3
ODP	kg CFC11 eq	2.76E-8	1.18E-8	2.59E-9	4.19E-8	1.22E-9	4.42E-9	6.25E-11	-1.62E-8	3.14E-8
AP	mol H+ eq	1.76E-3	3.60E-4	1.04E-4	2.22E-3	3.01E-5	1.82E-4	1.49E-6	-9.51E-4	1.49E-3
EP-fw	kg P eq	9.37E-6	4.12E-7	4.01E-7	1.02E-5	4.35E-8	9.00E-7	1.94E-9	-6.74E-6	4.39E-6
EP-m	kg N eq	3.31E-4	1.20E-4	1.76E-5	4.68E-4	1.08E-5	5.46E-5	1.06E-6	-1.86E-4	3.48E-4
EP-T	mol N eq	3.63E-3	1.33E-3	1.98E-4	5.15E-3	1.19E-4	6.00E-4	6.06E-6	-2.10E-3	3.78E-3
POCP	kg NMVOC eq	1.54E-3	3.73E-4	6.14E-5	1.98E-3	3.40E-5	1.88E-4	2.38E-6	-8.64E-4	1.34E-3
ADP-mm	kg Sb eq	6.07E-6	1.28E-6	6.29E-7	7.98E-6	1.37E-7	7.24E-7	1.50E-9	-2.08E-6	6.76E-6
ADP-f	MJ	1.49E+1	7.83E-1	3.40E-1	1.61E+1	8.12E-2	5.52E-1	4.57E-3	-8.39E+0	8.32E+0
WDP	m3 depriv.	3.23E-1	2.35E-3	1.20E-1	4.45E-1	2.49E-4	1.04E-2	2.09E-5	-2.07E-1	2.49E-1
PM	disease inc.	1.85E-8	4.49E-9	1.04E-9	2.41E-8	4.78E-10	2.96E-9	3.14E-11	-1.02E-8	1.73E-8
IR	kBq U-235 eq	1.44E-2	3.42E-3	3.17E-4	1.81E-2	3.55E-4	1.72E-3	2.13E-5	-7.36E-3	1.29E-2
ETP-fw	CTUe	7.31E+0	6.30E-1	5.36E-1	8.48E+0	6.59E-2	6.53E-1	4.03E-3	-4.07E+0	5.13E+0
HTP-c	CTUh	1.59E-10	2.30E-11	2.86E-11	2.10E-10	2.35E-12	7.52E-11	1.11E-13	-9.65E-11	1.91E-10
HTP-nc	CTUh	3.32E-9	7.42E-10	5.93E-10	4.65E-9	7.86E-11	9.40E-10	2.56E-12	-2.10E-9	3.57E-9
SQP	Pt	6.99E+0	6.46E-1	6.19E-2	7.70E+0	6.95E-2	4.34E-1	1.17E-2	-1.08E+1	-2.55E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.24E+0	1.10E-2	1.18E+0	2.43E+0	1.17E-3	2.66E-2	1.81E-4	-1.89E+0	5.65E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.24E+0	1.10E-2	1.18E+0	2.43E+0	1.17E-3	2.66E-2	1.81E-4	-1.89E+0	5.65E-1
PENRE	MJ	1.60E+1	8.31E-1	3.71E-1	1.72E+1	8.62E-2	5.88E-1	4.84E-3	-9.04E+0	8.87E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.60E+1	8.31E-1	3.71E-1	1.72E+1	8.62E-2	5.88E-1	4.84E-3	-9.04E+0	8.87E+0
PET	MJ	1.73E+1	8.42E-1	1.55E+0	1.97E+1	8.74E-2	6.15E-1	5.03E-3	-1.09E+1	9.43E+0
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	5.20E-3	8.65E-5	2.85E-3	8.14E-3	9.19E-6	3.13E-4	5.64E-6	-3.75E-3	4.71E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	3.29E-6	1.95E-6	3.30E-7	5.57E-6	2.08E-7	9.38E-7	5.48E-9	-3.09E-6	3.63E-6
NHWD	kg	2.48E-2	4.66E-2	3.22E-3	7.47E-2	5.03E-3	2.70E-2	2.01E-2	-1.15E-2	1.15E-1
RWD	kg	1.57E-5	5.33E-6	3.52E-7	2.14E-5	5.52E-7	2.20E-6	2.99E-8	-6.98E-6	1.72E-5
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