

Environmental Profile

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

Ecochain v3.5.64



Product: 3003655 - PE Tee 88,5° BK 90x40 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

A4 Transport gate to site

A5 Assembly / Construction installation process

Benefits and loads beyond the system boundaries

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	3.88E-1	5.12E-2	3.00E-2	4.69E-1	5.27E-3	2.49E-1	2.92E-3	-2.55E-1	4.70E-1
GWP-f	kg CO2 eq	4.44E-1	5.11E-2	2.57E-2	5.20E-1	5.26E-3	1.74E-1	2.92E-3	-2.90E-1	4.13E-1
GWP-b	kg CO2 eq	-5.64E-2	2.90E-5	2.17E-3	-5.42E-2	3.20E-6	7.42E-2	2.19E-6	3.46E-2	5.47E-2
GWP-luluc	kg CO2 eq	3.52E-4	1.88E-5	2.17E-3	2.54E-3	1.86E-6	3.07E-5	4.18E-8	-3.36E-4	2.24E-3
ODP	kg CFC11 eq	2.74E-8	1.17E-8	2.58E-9	4.17E-8	1.21E-9	4.40E-9	6.22E-11	-1.61E-8	3.13E-8
AP	mol H+ eq	1.75E-3	3.59E-4	1.04E-4	2.21E-3	3.00E-5	1.81E-4	1.48E-6	-9.47E-4	1.48E-3
EP-fw	kg P eq	9.34E-6	4.10E-7	3.99E-7	1.01E-5	4.33E-8	8.95E-7	1.93E-9	-6.72E-6	4.37E-6
EP-m	kg N eq	3.29E-4	1.19E-4	1.75E-5	4.66E-4	1.07E-5	5.44E-5	1.05E-6	-1.86E-4	3.47E-4
EP-T	mol N eq	3.61E-3	1.32E-3	1.97E-4	5.13E-3	1.18E-4	5.98E-4	6.03E-6	-2.09E-3	3.76E-3
POCP	kg NMVOC eq	1.54E-3	3.71E-4	6.11E-5	1.97E-3	3.38E-5	1.87E-4	2.36E-6	-8.61E-4	1.33E-3
ADP-mm	kg Sb eq	6.04E-6	1.28E-6	6.25E-7	7.94E-6	1.36E-7	7.20E-7	1.49E-9	-2.07E-6	6.73E-6
ADP-f	MJ	1.49E+1	7.79E-1	3.38E-1	1.60E+1	8.08E-2	5.50E-1	4.54E-3	-8.35E+0	8.28E+0
WDP	m3 depriv.	3.21E-1	2.33E-3	1.20E-1	4.43E-1	2.48E-4	1.04E-2	2.08E-5	-2.06E-1	2.47E-1
PM	disease inc.	1.84E-8	4.47E-9	1.04E-9	2.40E-8	4.75E-10	2.95E-9	3.12E-11	-1.02E-8	1.72E-8
IR	kBq U-235 eq	1.43E-2	3.40E-3	3.15E-4	1.80E-2	3.53E-4	1.71E-3	2.12E-5	-7.33E-3	1.28E-2
ETP-fw	CTUe	7.30E+0	6.27E-1	5.33E-1	8.46E+0	6.56E-2	6.50E-1	4.01E-3	-4.07E+0	5.11E+0
HTP-c	CTUh	1.58E-10	2.29E-11	2.84E-11	2.09E-10	2.34E-12	7.48E-11	1.10E-13	-9.63E-11	1.90E-10
HTP-nc	CTUh	3.31E-9	7.39E-10	5.90E-10	4.63E-9	7.82E-11	9.35E-10	2.55E-12	-2.10E-9	3.55E-9
SQP	Pt	6.98E+0	6.43E-1	6.16E-2	7.69E+0	6.91E-2	4.31E-1	1.17E-2	-1.08E+1	-2.56E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.24E+0	1.09E-2	1.17E+0	2.42E+0	1.16E-3	2.64E-2	1.80E-4	-1.89E+0	5.58E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.24E+0	1.09E-2	1.17E+0	2.42E+0	1.16E-3	2.64E-2	1.80E-4	-1.89E+0	5.58E-1
PENRE	MJ	1.60E+1	8.27E-1	3.69E-1	1.71E+1	8.58E-2	5.86E-1	4.82E-3	-9.00E+0	8.83E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.60E+1	8.27E-1	3.69E-1	1.71E+1	8.58E-2	5.86E-1	4.82E-3	-9.00E+0	8.83E+0
PET	MJ	1.72E+1	8.38E-1	1.54E+0	1.96E+1	8.70E-2	6.12E-1	5.00E-3	-1.09E+1	9.38E+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	5.17E-3	8.61E-5	2.84E-3	8.10E-3	9.14E-6	3.11E-4	5.62E-6	-3.74E-3	4.69E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	3.28E-6	1.94E-6	3.28E-7	5.55E-6	2.07E-7	9.34E-7	5.45E-9	-3.08E-6	3.61E-6
NHWD	kg	2.48E-2	4.64E-2	3.20E-3	7.43E-2	5.01E-3	2.68E-2	2.00E-2	-1.15E-2	1.15E-1
RWD	kg	1.56E-5	5.30E-6	3.51E-7	2.13E-5	5.50E-7	2.20E-6	2.97E-8	-6.96E-6	1.71E-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