

Environmental Profile

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

Ecochain v3.5.64



Product: 3003669 - PE Tee 88,5° BK 110x63 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]

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Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	6.36E-1	8.54E-2	4.98E-2	7.72E-1	8.75E-3	4.17E-1	4.84E-3	-4.26E-1	7.76E-1
GWP-f	kg CO2 eq	7.35E-1	8.53E-2	4.26E-2	8.63E-1	8.74E-3	2.89E-1	4.84E-3	-4.80E-1	6.85E-1
GWP-b	kg CO2 eq	-9.89E-2	4.84E-5	3.60E-3	-9.52E-2	5.31E-6	1.27E-1	3.64E-6	5.47E-2	8.68E-2
GWP-luluc	kg CO2 eq	5.72E-4	3.13E-5	3.60E-3	4.20E-3	3.09E-6	5.08E-5	6.95E-8	-5.41E-4	3.72E-3
ODP	kg CFC11 eq	4.53E-8	1.95E-8	4.28E-9	6.91E-8	2.01E-9	7.28E-9	1.03E-10	-2.66E-8	5.19E-8
AP	mol H+ eq	2.90E-3	5.97E-4	1.72E-4	3.67E-3	4.98E-5	3.00E-4	2.46E-6	-1.56E-3	2.46E-3
EP-fw	kg P eq	1.54E-5	6.84E-7	6.62E-7	1.67E-5	7.19E-8	1.48E-6	3.20E-9	-1.10E-5	7.32E-6
EP-m	kg N eq	5.43E-4	1.99E-4	2.90E-5	7.72E-4	1.78E-5	8.98E-5	1.74E-6	-3.07E-4	5.74E-4
EP-T	mol N eq	5.97E-3	2.20E-3	3.26E-4	8.50E-3	1.96E-4	9.88E-4	1.00E-5	-3.46E-3	6.23E-3
POCP	kg NMVOC eq	2.55E-3	6.18E-4	1.01E-4	3.27E-3	5.61E-5	3.10E-4	3.92E-6	-1.43E-3	2.21E-3
ADP-mm	kg Sb eq	1.00E-5	2.13E-6	1.04E-6	1.32E-5	2.26E-7	1.19E-6	2.47E-9	-3.43E-6	1.12E-5
ADP-f	MJ	2.47E+1	1.30E+0	5.61E-1	2.65E+1	1.34E-1	9.11E-1	7.54E-3	-1.38E+1	1.37E+1
WDP	m3 depriv.	5.33E-1	3.89E-3	1.98E-1	7.35E-1	4.12E-4	1.72E-2	3.45E-5	-3.39E-1	4.14E-1
PM	disease inc.	3.05E-8	7.45E-9	1.72E-9	3.97E-8	7.89E-10	4.88E-9	5.18E-11	-1.67E-8	2.87E-8
IR	kBq U-235 eq	2.37E-2	5.67E-3	5.23E-4	2.99E-2	5.86E-4	2.83E-3	3.52E-5	-1.20E-2	2.13E-2
ETP-fw	CTUe	1.18E+1	1.04E+0	8.85E-1	1.37E+1	1.09E-1	1.07E+0	6.65E-3	-6.56E+0	8.36E+0
HTP-c	CTUh	2.63E-10	3.82E-11	4.72E-11	3.49E-10	3.88E-12	1.24E-10	1.83E-13	-1.60E-10	3.17E-10
HTP-nc	CTUh	5.47E-9	1.23E-9	9.79E-10	7.68E-9	1.30E-10	1.55E-9	4.23E-12	-3.45E-9	5.92E-9
SQP	Pt	1.19E+1	1.07E+0	1.02E-1	1.31E+1	1.15E-1	7.15E-1	1.94E-2	-1.78E+1	-3.80E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	2.10E+0	1.82E-2	1.94E+0	4.06E+0	1.92E-3	4.38E-2	2.98E-4	-3.11E+0	1.00E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	2.10E+0	1.82E-2	1.94E+0	4.06E+0	1.92E-3	4.38E-2	2.98E-4	-3.11E+0	1.00E+0
PENRE	MJ	2.65E+1	1.38E+0	6.12E-1	2.84E+1	1.42E-1	9.70E-1	8.00E-3	-1.49E+1	1.46E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.65E+1	1.38E+0	6.12E-1	2.84E+1	1.42E-1	9.70E-1	8.00E-3	-1.49E+1	1.46E+1
PET	MJ	2.86E+1	1.40E+0	2.55E+0	3.25E+1	1.44E-1	1.01E+0	8.30E-3	-1.80E+1	1.56E+1
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	8.56E-3	1.44E-4	4.72E-3	1.34E-2	1.52E-5	5.16E-4	9.32E-6	-6.12E-3	7.85E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	5.43E-6	3.23E-6	5.45E-7	9.21E-6	3.43E-7	1.54E-6	9.05E-9	-5.11E-6	6.00E-6
NHWD	kg	4.09E-2	7.73E-2	5.31E-3	1.24E-1	8.31E-3	4.45E-2	3.32E-2	-1.91E-2	1.90E-1
RWD	kg	2.58E-5	8.84E-6	5.82E-7	3.53E-5	9.12E-7	3.63E-6	4.93E-8	-1.14E-5	2.84E-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



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