

Environmental Profile

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

Ecochain v3.5.64



Product: 3003661 - PE Tee 88,5° BK 90x75 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

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Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	4.12E-1	5.42E-2	3.18E-2	4.98E-1	5.59E-3	2.59E-1	3.09E-3	-2.71E-1	4.94E-1
GWP-f	kg CO2 eq	4.68E-1	5.41E-2	2.72E-2	5.49E-1	5.58E-3	1.85E-1	3.09E-3	-3.06E-1	4.37E-1
GWP-b	kg CO2 eq	-5.62E-2	3.07E-5	2.30E-3	-5.39E-2	3.39E-6	7.42E-2	2.32E-6	3.45E-2	5.49E-2
GWP-luluc	kg CO2 eq	3.60E-4	1.99E-5	2.30E-3	2.68E-3	1.98E-6	3.24E-5	4.44E-8	-3.39E-4	2.37E-3
ODP	kg CFC11 eq	2.88E-8	1.24E-8	2.73E-9	4.39E-8	1.29E-9	4.63E-9	6.60E-11	-1.69E-8	3.30E-8
AP	mol H+ eq	1.84E-3	3.80E-4	1.10E-4	2.33E-3	3.18E-5	1.91E-4	1.57E-6	-9.91E-4	1.57E-3
EP-fw	kg P eq	9.74E-6	4.34E-7	4.23E-7	1.06E-5	4.59E-8	9.46E-7	2.04E-9	-6.92E-6	4.68E-6
EP-m	kg N eq	3.44E-4	1.26E-4	1.85E-5	4.89E-4	1.14E-5	5.72E-5	1.11E-6	-1.94E-4	3.65E-4
EP-T	mol N eq	3.79E-3	1.40E-3	2.08E-4	5.39E-3	1.25E-4	6.29E-4	6.39E-6	-2.18E-3	3.97E-3
POCP	kg NMVOC eq	1.62E-3	3.92E-4	6.47E-5	2.08E-3	3.58E-5	1.97E-4	2.50E-6	-9.02E-4	1.41E-3
ADP-mm	kg Sb eq	6.37E-6	1.35E-6	6.63E-7	8.38E-6	1.44E-7	7.59E-7	1.58E-9	-2.17E-6	7.11E-6
ADP-f	MJ	1.57E+1	8.24E-1	3.58E-1	1.69E+1	8.57E-2	5.81E-1	4.82E-3	-8.82E+0	8.76E+0
WDP	m3 depriv.	3.40E-1	2.47E-3	1.27E-1	4.69E-1	2.63E-4	1.10E-2	2.21E-5	-2.16E-1	2.65E-1
PM	disease inc.	1.93E-8	4.73E-9	1.10E-9	2.51E-8	5.04E-10	3.11E-9	3.31E-11	-1.05E-8	1.83E-8
IR	kBq U-235 eq	1.51E-2	3.60E-3	3.34E-4	1.90E-2	3.74E-4	1.80E-3	2.24E-5	-7.62E-3	1.36E-2
ETP-fw	CTUe	7.46E+0	6.63E-1	5.65E-1	8.69E+0	6.96E-2	6.85E-1	4.25E-3	-4.13E+0	5.31E+0
HTP-c	CTUh	1.65E-10	2.42E-11	3.01E-11	2.19E-10	2.48E-12	7.90E-11	1.17E-13	-9.95E-11	2.01E-10
HTP-nc	CTUh	3.46E-9	7.82E-10	6.25E-10	4.87E-9	8.29E-11	9.88E-10	2.70E-12	-2.17E-9	3.77E-9
SQP	Pt	7.02E+0	6.81E-1	6.53E-2	7.77E+0	7.33E-2	4.56E-1	1.24E-2	-1.08E+1	-2.47E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.25E+0	1.16E-2	1.24E+0	2.51E+0	1.23E-3	2.79E-2	1.91E-4	-1.90E+0	6.38E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.25E+0	1.16E-2	1.24E+0	2.51E+0	1.23E-3	2.79E-2	1.91E-4	-1.90E+0	6.38E-1
PENRE	MJ	1.69E+1	8.75E-1	3.91E-1	1.81E+1	9.09E-2	6.19E-1	5.11E-3	-9.51E+0	9.34E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.69E+1	8.75E-1	3.91E-1	1.81E+1	9.09E-2	6.19E-1	5.11E-3	-9.51E+0	9.34E+0
PET	MJ	1.81E+1	8.87E-1	1.63E+0	2.06E+1	9.22E-2	6.46E-1	5.30E-3	-1.14E+1	9.98E+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	5.45E-3	9.11E-5	3.01E-3	8.56E-3	9.69E-6	3.29E-4	5.95E-6	-3.88E-3	5.02E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	3.42E-6	2.05E-6	3.48E-7	5.81E-6	2.19E-7	9.84E-7	5.78E-9	-3.22E-6	3.80E-6
NHWD	kg	2.57E-2	4.91E-2	3.39E-3	7.82E-2	5.31E-3	2.83E-2	2.12E-2	-1.19E-2	1.21E-1
RWD	kg	1.64E-5	5.61E-6	3.72E-7	2.24E-5	5.83E-7	2.31E-6	3.15E-8	-7.22E-6	1.81E-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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