

Environmental Profile

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

Ecochain v3.5.64



Product: 3070631 - PE Access Pipe S12,5 90° 160
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	2.84E+0	3.47E-1	2.18E-1	3.40E+0	3.85E-2	1.73E+0	2.09E-2	-1.88E+0	3.31E+0
GWP-f	kg CO2 eq	3.19E+0	3.46E-1	1.86E-1	3.72E+0	3.85E-2	1.28E+0	2.10E-2	-2.06E+0	3.01E+0
GWP-b	kg CO2 eq	-3.52E-1	1.97E-4	1.57E-2	-3.36E-1	2.34E-5	4.46E-1	1.61E-5	1.75E-1	2.85E-1
GWP-luluc	kg CO2 eq	2.11E-3	1.27E-4	1.57E-2	1.80E-2	1.36E-5	2.21E-4	3.07E-7	-1.87E-3	1.63E-2
ODP	kg CFC11 eq	1.86E-7	7.93E-8	1.87E-8	2.84E-7	8.87E-9	3.10E-8	4.57E-10	-1.09E-7	2.15E-7
AP	mol H+ eq	1.24E-2	2.39E-3	7.52E-4	1.56E-2	2.19E-4	1.28E-3	1.09E-5	-6.45E-3	1.06E-2
EP-fw	kg P eq	6.32E-5	2.78E-6	2.90E-6	6.89E-5	3.17E-7	6.44E-6	1.42E-8	-4.14E-5	3.43E-5
EP-m	kg N eq	2.27E-3	8.01E-4	1.27E-4	3.19E-3	7.84E-5	3.83E-4	7.78E-6	-1.25E-3	2.42E-3
EP-T	mol N eq	2.51E-2	8.84E-3	1.43E-3	3.53E-2	8.64E-4	4.21E-3	4.43E-5	-1.40E-2	2.65E-2
POCP	kg NMVOC eq	1.09E-2	2.49E-3	4.43E-4	1.39E-2	2.47E-4	1.32E-3	1.72E-5	-5.91E-3	9.53E-3
ADP-mm	kg Sb eq	5.86E-5	8.66E-6	4.54E-6	7.18E-5	9.95E-7	5.08E-6	1.09E-8	-1.49E-5	6.30E-5
ADP-f	MJ	1.08E+2	5.28E+0	2.45E+0	1.16E+2	5.91E-1	3.93E+0	3.34E-2	-6.00E+1	6.06E+1
WDP	m3 depriv.	2.31E+0	1.58E-2	8.68E-1	3.19E+0	1.81E-3	7.53E-2	1.53E-4	-1.37E+0	1.90E+0
PM	disease inc.	1.28E-7	3.03E-8	7.53E-9	1.66E-7	3.47E-9	2.09E-8	2.29E-10	-6.57E-8	1.25E-7
IR	kBq U-235 eq	9.95E-2	2.30E-2	2.29E-3	1.25E-1	2.58E-3	1.21E-2	1.56E-4	-4.73E-2	9.24E-2
ETP-fw	CTUe	4.36E+1	4.25E+0	3.87E+0	5.17E+1	4.80E-1	4.65E+0	2.96E-2	-2.34E+1	3.35E+1
HTP-c	CTUh	1.08E-9	1.55E-10	2.06E-10	1.44E-9	1.71E-11	5.33E-10	8.10E-13	-6.22E-10	1.37E-9
HTP-nc	CTUh	2.32E-8	5.01E-9	4.28E-9	3.25E-8	5.72E-10	6.69E-9	1.87E-11	-1.35E-8	2.62E-8
SQP	Pt	4.28E+1	4.37E+0	4.47E-1	4.76E+1	5.05E-1	3.10E+0	8.56E-2	-6.02E+1	-8.91E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	7.67E+0	7.41E-2	8.49E+0	1.62E+1	8.47E-3	1.90E-1	1.32E-3	-1.06E+1	5.84E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	7.67E+0	7.41E-2	8.49E+0	1.62E+1	8.47E-3	1.90E-1	1.32E-3	-1.06E+1	5.84E+0
PENRE	MJ	1.16E+2	5.60E+0	2.68E+0	1.24E+2	6.27E-1	4.19E+0	3.54E-2	-6.46E+1	6.46E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.16E+2	5.60E+0	2.68E+0	1.24E+2	6.27E-1	4.19E+0	3.54E-2	-6.46E+1	6.46E+1
PET	MJ	1.24E+2	5.67E+0	1.12E+1	1.41E+2	6.35E-1	4.38E+0	3.67E-2	-7.52E+1	7.05E+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	3.68E-2	5.84E-4	2.06E-2	5.80E-2	6.68E-5	2.29E-3	4.12E-5	-2.40E-2	3.64E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	2.22E-5	1.32E-5	2.38E-6	3.77E-5	1.51E-6	6.62E-6	4.01E-8	-2.09E-5	2.50E-5
NHWD	kg	1.67E-1	3.15E-1	2.32E-2	5.06E-1	3.66E-2	1.93E-1	1.47E-1	-7.51E-2	8.07E-1
RWD	kg	1.08E-4	3.59E-5	2.55E-6	1.47E-4	4.02E-6	1.55E-5	2.18E-7	-4.47E-5	1.22E-4
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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